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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 14, 2002, 08:48:29; Search time 12.59 Seconds (without alignments) 321.731 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-828-000-3 180

1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180 Scoring table:

OLIGO Gapop 60.0 , Gapext 60.0

212252 seqs, 22503292 residues

Searched:

18

Word size :

0 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 45 summaries

Issued_patents_AA:*
1: /cgn2_6/ptodata/2/laa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/laa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/laa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/laa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/laa/pcay. Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Query Score Match Length DB Result

Description

No matches found

Search completed: January 14, 2002, 08:50:22 Job time: 113 sec

WARE BURNER WARE

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A37047
Calreticulin precursor - human
N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding prote
N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding prote
C;Species: Homo saplens (man)
C;Species: Homo saplens (man)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000
C;Accession: A42330; A37047; A46452; A28812; PH1525; A40346; S11475; T45075
R;McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sontheimer, R.D.; Capra, J.D.
J Biol. Chem. 267, 2557-2562, 1992
J;Biol. Chem. 267, 2557-2562, 1992
A;Fitle: The 5'-flanking region of the human calreticulin gene shares homology with the A;Recession: A42330; MUID:92129342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin precu calreticulin precu calreticulin precu calreticulin precu calreticulin precu calreticulin precu calreticulin folon calreticulin precu calreticulin precu
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(without alignments)
950.202 Million cell updates/sec
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                                                                                                                                                                                                                                1 EPAVYFKEQFLDGDGWTSRW.......PDNTYEVKIDNSQVESGSLE 180
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                  Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
GenCore version 4.5
Copyright (c) 1993 - 2000 Com
                                                                                                                                                                                                                                                                                                                               219241 seqs, 76174552 residues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                             January 14, 2002, 08:49:15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Listing first 45 summaries

    protein search, using sw model

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S43376
S36799
JH0795
S29130
S29129
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A32507
A56637
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S06763
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Maximum DB seq length: 2000000000
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Match Length
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1: pir1:*
2: pir2:*
3: pir3:*
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42.8
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                                                                        OM protein
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A; Accession: PH1525
A; Molecule type: protein
A; Residues: 18-27 cDUP>
A; Residues: 18-27 cDUP>
A; Experimental source: LAK cell
B; Rojiani, M.V.; Finlay, B.B.; Gray, V.; Dedhar, S.
Biochemistry 30, 9859-9866, 1991
A; Title: In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (c A; Reference number: A40346; MUID:92002034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)
R;Lieu, T.S.; Newkirk, M.M.; Capra, J.D.; Sontheimer, R.D.
J. Ciln. Invest. 82, 96-101, 1988
A;Fitle: Molecular characterization of human Ro/SS-A antigen. Amino terminal sequence A;Reference number: A28812; MUID:88273610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: A40346
A; Molecule type: protein
A; Residues: 18-34, "R' <ROJ>
R; Krause, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
A; Fitle: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-pu
A; Reference number: S11475; MUID: 90380058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Dupuis, M.; Schaerer, E.; Krause, K.H.; Tschopp, J.

1. Exp. Med. 177, 1-77, 1993
A;Title: The calcium-binding protein calreticulin is a major constituent of lytic gra
A;Reference number: PH1525; MUID:93115648
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                                                                                 R;McCauliffe, D.P.; Lux, F.A.; Lieu, T.S.; Sanz, I.; Hanke, J.; Newkirk, M.M.; Bachin J. Clin. Invest. 85, 1379-1391, 1990
A;Title: Molecular cloning, expression, and chromosome 19 localization of a human Ro/A;Reference number: A37047; MUID:90237213
A;Accession: A37047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein
A; Residues: 18-32 < KRA>
R; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
submitted to the EMBL Data Library, November 1996
A; Description: Characterization by genomic sequence analysis of a gene-rich 111 kb.
A; Reference number: 222906
                                                                                                                                                                                                                                                                                 A Molecule type: mRNA
A; Residues: 1-417 <MCC>
A; Cross-references: GB:M32294; NID:g337486; PIDN:AAA36582.1; PID:g337487
A; Cross-references: GB:M32294; NID:g337486; PIDN:AAA36582.1; PID:g337487
A; Note: the authors translated the codon GTA for residue 349 as Tyr
B; Rokeach, L.A.; Haselby, J.A.; Meilof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene,
J:Immunol. 147; 3031-3039, 1991
A; Fitle: Characterization of the autoantigen calreticulin.
A; Reference number: A46452; MUID:92013129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-417 <ROK>
A;Cross-references: GB:M84739; NID:g179881; PIDN:AAA51916.1; PID:g179882
                                        A;Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536) R;McCauliffe, D.P.; Lux, F.A.; Lieu, T.S.; Sanz, I.; Hanke, J.; Newkirk,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GDB:125179; OMIM:109091
A;Map position: 19p13.3-19p13.2
A;Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
A;Note: CRTC
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F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-417/Product: calreticulin #status predicted <MAT>
F;14-417/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A Status: preliminary; translated from GB/EMBL/DDBJ A; Molecule type: DNA A; Molecule type: DNA A; Residues: 1-417 < LAM>
A; Cross-references: EMBL:AD000092; PIDN:AAB51176.1 A; Experimental source: cell line 5HL2-B; fibroblast C; Comment: Autoantibodies specific for this protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein
A; Residues: 18-41 <LIE>
A; Note: 18-Ala was also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Superfamily: calreticulin
A; Residues: 1-417 <MC2>
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A;Residues: 18-36 <War
A;Residues: 18-36 <War
R;Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M
Biochem. J. 271, 473-480, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             itive calcium sequestering rat liver vesicles. A; Reference number: A34473; MUID:90008920
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REBULT 2

Galretulin precursor - mouse

N.Alesrate names: 55% calcium-binding reticuloplasmin; calregulin
C.Species in twis musculus (house mouse)
C.Date: 10-6ep-1999 seaquence_revision 10-5ep-1999 #text_change 10-5ep-1999
C.Pacession: 806753 JC1444; PC1233; A57498
R.Smith, M.J.; Koch, G.L.E.
R.MED J. 8, 3584-3586, 1898
A.Title: Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a me
A.Redesion: 104673
A.Mocossion: 104673
A.Mocossion: 104673
A.Mocossion: 104673
A.Mocossion: 104673
A.Mocossion: 10444
A.Residues: 104144
A.Residues: 104144
A.Residues: 18-416 CAM2
A.Residues: 18-418 MUID:95332280
A.Stetus: preliminary
A.Residues: 74-80:142-151:88-193 CAM1P
A.Residues: 74-80:142-151:88-193 CAM1P
A.Residues: 74-80:142-151:88-193 CAM1P
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                                                                                                                                                                                                                                                                                 78 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 137
                                                                                                                                                                                                                                                                                                                                                                                                    104 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 163
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C; Keywords: calcium binding
F;1-17, Domain: signal sequence #status predicted <SIG>
F;18-416/Product: calregulin #status experimental <MAT>
F;413-416/Region: endoplasmic reticulum retention signal
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100.0%; Pred. No. 5.2e-74;
tive 0; Mismatches 0;
                     DB 1;
               Score 180; DB 1;
Pred. No. 7e-184;
; Mismatches 0
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               100.0%;
100.0%;
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                                                                        Conservative
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Matches 77; Conserv
                                             Similarity
                                             Best Local Sim
Matches 180;
               Query Match
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C;Species: Bos primigenius taurus (cattle)
C;Date: 10-Dec-1993 #sequence_revision 23-Mar-1995 #text_change 13-Aug-1999
C;Accession: S36799; S36800
R;Liu, N.; Fine, R.E.; Johnson, R.J.
Biochim. Biophys. Acta 1202, 70-76, 1993
A;Title: Comparison of cDNAs from bovine brain coding for two isoforms of_calreticul1 A;Reference number: S36799; MUID:93385184
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                                        T.; Isobe,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;397-400/Region: endoplasmic_reticulum retention signal
F;120-146/Disulfide bonds: #status experimental
F;162/Binding site: carbohydrate (Asn) (covalent) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;183/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 400;
      C;Accession: S43376; S36801
R;Matsuoka, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda,
Biochem. J. 298, 435-442, 199,
A;Fitle: Covalent structure of bovine brain calreticulin.
A;Reference number: S43376; MUID:94183174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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A; Residues: 35-45 < L12>
C; Superfamily: calreticulin
C; Keywords: calculum binding; glycoprotein
C; Keywords: calculum binding; glycoprotein
F; 1-3-47 Domain: signal sequence #status predicted <SIG>F; 1-3-42 Product: calreticulin, brain isoform 2 #status | F; 418-421 Kegion: endoplasmic reticulum retention signal
F; 411-167 Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2; Leus
7. Se-58;
0;
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llarity 100.0%; Pred. No. 5.2e-58;
Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                              R;Liu, N.; Fine, R.E.; Johnson, R.J.
Blochim. Blophys. Acta 1202, 70-76, 1993
A;Title: Comparison of cDMS from bovine b
A;Reference number: S36799; MUID:93385184
                                                                                                                                                                                                                                                                                                                                                                                                       A;Accession: S36801
A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Keywords: calcium binding; glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 45-63, 'E', 65-83 <LIU>
A; Experimental source: brain, clone 8.1
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Matches 62; Conservative
                                                                                                                                                                                                                                                     A; Experimental source: brain
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                                                                                                                                                           A; Accession: S43376
A; Molecule type: protein
A; Residues: 1-400 <MAT>
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les 62; Conserv
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A; Residues: 1-421 <LIU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: S36799
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Best Local S
Matches 62
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A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-storage A; Reference number: $13045; MUD:91054414
A; Reference number: $13045; MUD:91054414
A; Accession: $13045
A; Molecule type: protein
A; Residues: 18-29 <TRE>
C; Superfamily: calreticulin
C; Superfamily: calreticulin
E; 1-17/Domain: signal sequence #status predicted <SIG>
F; 18-416/Product: calreticulin #status experimental <MAT>
F; 204-212/Region: nuclear location signal
F; 413-416/Region: endoplasmic reticulum retention signal
F; 344/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R;Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; Meld
Blochen. J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-storage
A;Reference number: S13045; MUID:91054414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A34154

A34154

Calrettoulin precursor, skeletal muscle - rabbit

C.Species: Oryctolagus cuniculus (domestic rabbit)

C.Species: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

C.Accession: A34154; S13047

R.Fliegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.
J. Biol. Chem. 264, 21522-21528, 1989

A;Title: Molecular cloning of the high affinity calcium-binding protein (calreticulin)

A;Reference number: A34154; MUID:90094320
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calreticulin, brain isoform 1 - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 20-Oct-1994 #sequence_revision 23-Mar-1995 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         104 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 163
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F;1-17/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 77; DB 1; Le
Pred. No. 5.2e-74;
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Best Local Similarity 100.0
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Matches 77; Conservative
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A;Residues: 19-32 <TRE>
C;Superfamily: calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-418 <FLI>
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A; Status: preliminary
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R;Yamamoto, S.; Nakamura, M.
FEBS Lett. 387, 27-32, 1996
A;Title: Calnexin: its molecular cloning and expression in the liver of the frog, Ran A;Reference number: S71342; MUID:96234004
A;Accession: S71343
A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Calreticulin precursor (clone 3) - African clawed frog (fragment)
C.Species: Xenopus laevis (African clawed frog)
C.Species: Xenopus laevis (African clawed frog)
C.Species: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C.Accession: S29129
R.Treves, S.; Zorzato, F.; Pozzan, T.
Blochem. J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system.
A;Reference number: S29129; MUID:93074997
A;Recession: S29129
A;Molecule type: mRNA
A;Residues: 1-411 <TRE>
A;Corsos=references: EMBL:X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C;Superfamily: calreticulin
C;Keywords: glycoprotein
F;13-11/Pomain: signal sequence (fragment) #status predicted <AMT>
F;33-11/Product: calreticulin #status predicted <AMT>
F;339/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A; Molecule type: mRNA
A; Residues: 1-419 < CAM>A; Cross-references: EMBL:D78589; NID:g1514956; PIDN:BAA11425.1; PID:g1514957
A; Cross-references: EMBL:D78589; NID:g1514956; PIDN:BAA11425.1; PID:g1514957
C; Superfamily: calreticulin
C; Keywords: calcium binding; endoplasmic reticulum
C; Keywords: calcium binding; endoplasmic reticulum
F; 1-18 / Dynomin: signal sequence #status predicted < SIG>
F; 19-419/Product: calreticulin #status predicted < MAT>
F; 205-213/Region: nuclear location signal
F; 415-418/Region: endoplasmic reticulum retention signal
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C;Species: Rana rugosa (Korean frog)
C;Date: 29-Jan.1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
C;Accession: S71343
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C;Keywords: glycoprotein
F;381-384/Region: endoplasmic reticulum retention signal
F;316/Binding site: carbohydrate (Asn) (covalent) *status predicted
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                                                                                                                                                                 Length 384,
                                                                                                                                      Score 22; DB 2; Leg
Pred. No. 2.2e-15;
Pred. no. 2.2e-15;
                                                                                                                                             12.2%; Scc...
100.0%; Pred. No. ...
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                                                                                                                                                                                                                                                                                                                                       140 FTHLYTLIVRPDNTYEVKIDNS 161
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                                                                                                                                                                 Query Match 12.2
Best Local Similarity 100.
Matches 22; Conservative
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Best Local Similarity 100.
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A; Realdues: 1-405 < KENN
A; Realdues: 1-405 < KENN
A; Realdues: 1-405 < KENN
A; Cross = references: GB:551239; NID:9262053; PIDN:AAB24569.1; PID:9262054
A; Kxperimental source: abdominal ganglion and antral nervous system
B; Kennedy, T.E.; Gawinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7008-7012, 1988
A; Title: Sequencing of proteins from two-dimensional gels by using in situ digestion and
                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Title: Long-term sensitization training in aplysia leads to an increase in calreticula A; Reference number: JH0795; MUID:93098937 A; Accession: JH0795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecula type: protein
A; Residues: 'X',17-28,'X',30-31 <KE2>
A; Residues: 'X',17-28,'X',30-31 <KE2>
R; Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K. Electrophoresis 10, 152-157, 1396
A; Title: Development of a database of amino acid sequences for proteins identified and 1 A; Reference number: A60977; MUID:89276264
A; Accession: F60977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
s29130
calreticulin (clone 8) - African clawed frog (fragment)
c.Species: Xenopus laevis (African clawed frog)
C.Species: Xenopus laevis (African clawed frog)
C.Species: Yelloge
C.Species: Yelloge
C.Scecesion: S29130; T01068
R.Trives, S.; Zorzato, F.; Pozzan, T.
Biochem J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system.
A;Reference number: S29129; MUID:93074997
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                                                                                                                                                                                                                                                           N;Alternute numes: protein 407
C;Species: Aplysia californica (California sea hare)
C;Detc: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: JH0795; B31409; F60977
C;Kornedy, T.E.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
Neuron 9, 1013-1024, 1992
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A; Residues: 1-384 <TRE>
A; Cross-references: EMBL:X67598
A; Accession: T01068
A; Status: translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-339, YTGR' <TRW>
A; Residues: 1-339, YTGR' <TRW>
A; Cross-references: EMBL:X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.0%; Score 27; DB 1; Le
ilarity 100.0%; Pred. No. 1.1e-20;
Consorvative 0; Mismatches 0;
                                                                                                                                                                                                                               calreticulin precursor - California sea hare
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Wolecule type: protein
A; Rewidues: 'X',17-28,'X',30-31 <SWE>
C; Superfamily: calreticulin
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C; Superfamily: calreticulin
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Matches 27; Conserve
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160 RP 161
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A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual trataMolecule type: DNA
A;Molecule type: DNA
A;Residues: 91-105,'A',107,109-124;182-183,'L',185-220 <MCC>
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A; Residues: 1-406 <SMIS.

A; Residues: 1-406 <SMIS.

A; Cross-references: GB:X64461; NID:g7685; PIDN:CAA45791.1; PID:g7686

A; Note: sequence extracted from NCBI Dackbone (NCBIN:128274, NCBIP:128275)

B; McCauliffe, D.P.; Zappi, E.; Lieu, T.S.; Michalak, M.; Sonthelmer, R.D.; Capra, J.D.

J. Clin. Invest. 86, 332-335, 1990

A; Title: A human Ro/SS-A autcantigen is the homologue of calreticulin and is highly homologue on number: A37158; MUID:90307981
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A56637

Calreticulin homolog precursor - fruit fly (Drosophila melanogaster)

N'Alternate names: Ro/SS-A autoantigen/calreticulin homolog

C.Species: Drosophila melanogaster

C;Date: 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999

R;Smith, M.J.

DNA Seq. 3, 247-250, 1992

A;Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin |

A;Reference number: A56637; MUID:93208374
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C; Keywords: calclum binding; endoplasmic reticulum
F:1-17/Domain: signal sequence #status predicted <SIS>
F;403-406/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10.6%; Score 19; DB 2; L 100.0%; Pred. No. 3.2e-12; tive 0; Mismatches 0;
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A;Cross-references: FlyBase:FBgn0005585
171 HLYTLIVRPDNTYEVKIDNS 190
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A; Status: preliminary
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 protein search, using sw model protein January 14, 2002, 08:49:34; Search time 11.77 Seconds Run on:

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560.720 Million cell updates/sec

US-09-828-000-3 score:

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OLIGO Gapop 60.0 , Gapext 60.0 Scoring table:

100059 seqs, 36664827 residues Searched:

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Word size :

σ Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

summaries Post-processing: Listing first 45

SwissProt_39:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

			Description	P27797 homo sapien	P14211 mus musculu	P18418 rattus norv	P15253 oryctolagus	P52193 bos taurus	P42918 bos taurus	P28491 sus scrofa	P11012 onchocerca	P29413 drosophila
SOMMANTES			a	CRTC_HUMAN	CRTC_MOUSE	CRTC_RAT	CRTC_RABIT	CRT1_BOVIN	CRT2_BOVIN	CRTC_PIG	RAL1_ONCVO	CRTC_DROME
			8	-	-	7	٦	-	,	,	-	1
			Length	417	416	416	418	400	421	105	388	406
	æ	Query	e Match Length DB I	100.0	42.8	42.8	42.8	34.4	34.4	13.9	10.6	10.6
			Score	180	77	77	77	62	62	25	19	19
		Result	No.	-	7	m	4	S	9	7	6 0	5

ALIGNMENTS

RD; PRT; 417 AA.	Created)	ast sequence update)	st annotation update)	CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (52 KD	RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).			Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom1;	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.				005;	Rokeach L.A., Haselby J.A., Meilof J.F., Smeenk R.J., Unnasch T.R.
PRT;	Created)	ast sequence update)	st annotation update)	PRP55) (CALREGULIN) (HACBP) (ERP60)	IGEN RO/SS-A).			Craniata; Vertebrata; Euteleos	Catarrhini; Hominidae; Homo.				005;	eilof J.F., Smeenk R.J., Unnasc
PRT;	Created)	ast sequence update)	st annotation update)	RP55) (CALREGULIN) (HACBP) (ER	IGEN RO/SS-A).			Craniata; Vertebrata; Eut	Catarrhini; Hominidae; Ho				005;	eilof J.F., Smeenk R.J., U
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This SWISS-PROT entry is copyright. It is produced through a collaboration
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MEDILINE-90237213; PubMed-2332496;
MCGauliffe D.P., Lux F.A., Lieu T.S., Sanz I., Hanke J., Newkirk M.M.,
Bachinski L.L., Itoh Y., Siciliano M.J., Reichlin M., Sonthelmer R.D.,
                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE-92129342; PubMed-1733953; MCCauliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; "The 5'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                                                                                                                                              MEDILINE-92002034; PubMed=1911778; Rojiani M.V., Finlay B.B., Gray V., Dedhar S.; Rojiani M.V., Finlay B.B., Gray V., Dedhar S.; In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calreticulin) with a highly conserved amino acid sequence in the cytoplasmic domain of integrin alpha subunits."; Blochemistry 30:9859-9866(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Krause K.H., Simmerman H.K.B., Jones L.R., Campbell K.P.; "Sequence similarity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                                                                                "Molecular cloning, expression, and chromosome 19 localization of a
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                                                                                                                                                                                                                                                                                                                                                     Lamerdin J., McCready P., Stilwagen S., Ramirez M., Carrano A.;
Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=3315,045; PubMed=1286669;
Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier |
Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier |
Pasquali C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas
Appel R.D., Hughes G.J.;
"Human liver protein map a reference database established by
microsequencing and gel comparison.";
Electrophoresis 13:992-1001(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rasmussen H.H., van Damme J., Puype M., Gesser B., Celis J.E.,
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"Characterization of the autoantigen calreticulin."; J. Immunol. 147:3031-3039(1991).
                                                                                                                                                   human Ro/SS-A autoantigen.";
J. Clin. Invest. 85:1379-1391(1990).
                                                                                                                                                                                                                                                                                                    Biol. Chem. 267:2557-2562(1992).
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MEDLINE=93162043; PubMed=1286667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=90380058; PubMed=2400400;
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                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 18-36.
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                                                                                                                  Capra J.D.;
                                                                                                                                                                                                                                                                                   promoters.
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CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
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            the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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    EMBL outstation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 77
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 the Swiss Institute of Bioinformatics and the
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PREVENT SECRETION FROM ER.

MISSING (IN REF. 3).

BC37C3C0F1054FB2 CRC64;
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PROSITE; PS00803; CALRETICULIN 1; 1.
PROSITE; PS00804; CALRETICULIN 2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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                                                                                                                                                                                                                                          InterPro; IPR001580; Calreticulin.
InterPro; IPR00886; ER target.
PR PF00262; Calreticulin; I.
PRIMTS; PR00626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; I.
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                                                                                                                                               PIR; S11475; S11475.
PIR; A42330; A42330.
PIR; A46452; A46452.
SWISS-2DPAGE; P27797; HUMAN.
Aarhus/Ghont-2DPAGE; 9401; IEF.
HSC-2DPAGE; P27797; HUMAN.
                                                                                                                     EMBL; AD000092; AAB51176.1; -. PIR; A37047; A37047.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48141 MW;
                                                                                            EMBL; M84739; AAA51916.1; -.
                                                                                                         EMBL; M32294; AAA36582.1;
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417 AA;
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Matches 180; Conserv
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P14211;
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CRTC_MOUSE
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(Rel. 13, Created) (Rel. 13, Last sequence update) (Rel. 37, Last annotation update)

01-JAN-1990 (01-JAN-1990 (15-DEC-1998 (

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                                                                                                                                                                                  MEDINE-93013037; PubMed-1398135; Mazzarella R.A., Gold P., Cunningham M., Green M.; Glassermination of the sequence of an expressible cDNA clone encoding "Determination of the sequence of an expressible cDNA clone encoding ERP60/calregulin by the use of a novel nested set method."; Gene 120:217-225(1992).
                                                                           SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN=BALB/C; TISSUE-Liver;
MEDLINE=90059955; PubMed=2583110;
Smith M.J., Koch G.L.E.;
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X14926; CAA33053.1; -.
EMBL; M92988; AAA37569.1; -.
PIR; 306763; 806763.
PIR; JC1444; JC1444.
SWISS-2DPAGE; P14211; MOUSE.
MGD; MGI:88252; CBLT.
InterPro; IPR001580; Calreticulin.
InterPro; IPR001580; CALRETICULIN.
PRINTS; PR00625; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
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                               Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
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                                                                                                                                                                        SEQUENCE FROM N.A.
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3309
3309
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                                                                                                                    Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Okinaga S., Kobayashi T.; "An endoplasmic reticulum protein, calreticulin, is transported into the acrosome of rat sperm."; Exp. Cell Res. 205:101-110(1993).
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                                                                                                                                                                                                                        CRTC_RAT STANDARD; PRT; 416 AA.
P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (CALBP)
(CALCIUM-BINDING PROTEIN 3) (CABP3).
                                                                                                                                                                                                                                                                                                                                                                                                            Holmes C., Patel Y.C.; "Structural homology between the rat calreticulin gene product and the Onchocerca volvulus antigen Ral-1."; Nucleic Acids Res. 18:4933-4933(1990).
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Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
"Calreticulin is a candidate for a calsequestrin-like function in
Ca2(+)-storage compartments (calciosomes) of liver and brain.";
Blochem. J. 271:473-480(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robinson D.G., Mieskes G.; Retention and retrieval: both mechanisms cooperate to maintain calreticulin in the endoplasmic reticulum.";
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                                                                                                                                                                                                                                                                                                                                                                              STRAIN=SPRAGUE-DAWLEY; TISSUE=Brain cortex;
MEDLINE=90370496; PubMed=2395661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-SPRAGUE-DAWLEY, TISSUE-Liver;
MEDLINE-95181573; PubMed-7876339;
Soennichsen B., Fuellekrug J., van Nguyen P., Diekmann W.,
                                                               Length 416;
                                                              42.8%; Score 77; DB 1; Length 416
100.0%; Pred. No. 9e-72;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
 ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
24C03B00913408D8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-SPRAGUE-DAWLEY;
MEDLINE-93202172; PubMed-8453984;

    Cell Sci. 107:2705-2717(1994).

407 AS
163 BY
416 PF
47994 MW;
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                                                                                                                                                 164 TYEVKIDNSQVESGSLE 180
                                                                                                                                                             181 TYEVKIDNSQVESGSLE 197
                                                    Query Match
Best Local Similarity 100.0
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                           'Identification of protein disulfide isomerase and calreticulin as
                                                                                                                                                                                                                                                                                                                                                               autoimmune antigens in LEC strain of rats.";
Biochim. Biophys. Acta 1158:339-344(1993).
LOW LOW THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-: SUBUNIT: MONOMER (BY SIMILARITY).
-: SUBGLIULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-: SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-: CAUTION: WAS ORIGINALLY (REF. 2) THOUGHT TO BE D-BETA-HYDROXYBUTYRATE DEHYDROGENASE.
                                                                                                                                                                                                                       MEDLINE-94(72621; PubMed-8251535;
Yokoi T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
Kamataki T.,
                                                                                     rat
STRAIN-SPRAGUE-DAWLEY; TISSUE-Testis;
BEDLINE-92560010; PubMed-1497655;
Nakamura M., Michikawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
2E6713CED31A2970 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Endoplasmic reticulum; Calcium-binding; Repeat; Signal,
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                                                                                                                                        Biochem. Biophys. Res. Commun. 186:668-673(1992).
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PROSITE; PS00803; CALRETICULIN_1: 1.
PROSITE; PS00804; CALRETICULIN_2: 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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EMBL; X79327; CAA55890.1; -.
PIR; S104867; S04867.
PIR; S11205; S11205.
PIR; S13045; S13045.
PIR; S49036; A49176.
PIR; JH0819; JH0819.
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InterPro; IPR000886; ER_target.
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416 AA;
                                                                                                                                                                                                SEQUENCE OF 18-32,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Guan S., Falick A.M., Williams D.E., Cashman J.R.;

"Evidence for complex formation between rabbit lung flavin-containing monocaygenase and calreatculin.";

#INCOMPAGE THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.

-1- SUBBUIT: MONOMER (BY SIMILARITY).

-1- SUBBUIT: BELONGS TO THE CALREITCULUM LUMEN.

-1- SIMILARITY: BELONGS TO THE CALREITCULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Slow-twitch skeletal muscle;
MEDLINE-90094420; PubMed-2600080;
Filegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
Molecular cloning of the high affinity calcium-binding protein
(calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
                                                                                    104 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 163
                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryctolagus cuniculus (Rabbit).
Eukaryota, Matazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDINE-91054414; PubMed-2241926; Traves S., do Mattel M., Lanfredi M., Villa A., Green N.M., Maclennan D.H., Meldolesi J., Pozzan T.; "Calrecticulin is a candidate for a calsequestrin-like function i Ca2(+)-storage compartments (calciosomes) of liver and brain."; Biochem. J. 271:473-480(1990).
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                                                                                                                                                                                                                                                                                                                                                                                       01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
42.8%; Score 77; DB 1; Length 416; 100.0%; Pred. No. 9e-72; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                           418 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Fust-twitch skeletal muscle; MEDLINE-91282795; PubMed-2059224;
                                                                                                                                                                                                                                                                                                                           PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-91201375; PubMed-2016321;
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MEDLINE-92002038; PubMed-1911780;
                                                                                                                                                                                                                                                                                                                                                                      01-APR-1990 (Rel. 14, Created)
                                                                                                                                                                      164 TYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                 181 TYEVKIDNSQVESGSLE 197
                                            Conservative
                                                                                                                                                                                                                                                                                                                         STANDARD;
                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                          Best Local Simi
Matches 77;
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P15253;
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01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 34, Last annotation update)
01-0CT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 1 (CRP55) (CALREGULIN) (HACBP).
Bos taurus (Bovine).
Bos taurus (Bovine).
Bos taurus (Bovine).
CALGETICULIN (HACBP).
Bovine).
Bovines, Metacos, Chordata, Craniata, Vertebrata, Euteleostomi, Bovinae, Bovinae, Bos.
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Pred. No. 9e-72;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO0626; CALRETICULIN.
PROSTE; PRO01866; CALRETICULIN; 1.
PROSTE; PSO0144; E. TARGET; 1.
PROSTE; PSO0803; CALRETICULIN_1; 1.
PROSTE; PSO0804; CALRETICULIN_2; 1.
PROSTE; PSO08065; CALRETICULIN_REPRAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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PREVENT SECRETION FROM ER.
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B6082B689DC763A6 CRC64;
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100.0%; Pred. No. ...
0; Mismatches
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PIR; F33208; F33208.

PIR; S13046; S13046.

PIR; S13047; S13047.

InterPro; IPR001580; Calreticulin.
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Pfam; PF00262; calreticulin; 1.
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PIR; C33208; C33208.
PIR; D33208; D33208.
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ID CRTL_BOVIN
AC P52193;
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Sus scrofa (Pig).
           calreticulin."
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P28491;
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01-NOV-1995 (Rel. 32, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                             Matsuoka K., Seta K., Yamakawa Y., Okuyama T., Shinoda T., Isobe T.; "Covalent structure of bovine brain calreticulin.";
                                                                                                                                                                                                                                                                                                                                                  N-LINKED (GLCNAC. ..).
PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEF1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
                                                             Biochem. J. 298:435-442(1994).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS000014; CALRETICULIN 1; 1.
PROSITE; PS00804; CALRETICULIN 2; 1.
PROSITE; PS00806; CALRETICULIN 2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                  Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                       -!- SUBUNIT: MONOMER.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARIY: BELONGS TO THE CALRETICULIN FAMILY.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                             4 X APPROXIMATE REPEATS.
1-1.
1-2.
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Pred. No. 2.6e-56;
0; Mismatches 0;
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                                                                                                                                                          ProDom; PD001866; Calreticulin; 1. PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                        34.4%; SCUL
100.0%; Pre
0;
                           TISSUE-Brain;
MEDLINE-94183174; PubMed-8135753;
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                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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400
238
185
204
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Matches 62; Conserv
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NCBI_TaxID=9913;
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P42918;
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RP 161
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DISULFID
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                                                Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBGNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
'Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLCNAC. . .) (POTENTIAL). PREVENT SECRETION FROM ER. 0257E959F71528BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-DEC-1992 (Rel. 24, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ς.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN, BRAIN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRINES, FROUSE, CALTETION...
PROSITE; PS000146; ER_TARGET; 1.
PROSITE; PS00804; CALRETICUIN.1; 1.
PROSITE; PS00804; CALRETICUIN.2; 1.
PROSITE; PS00805; CALRETICUIN.2; 1.
PROSITE; PS00805; CALRETICUIN.Z; 1.
Endoplasmic reticulum; Calcium.binding; Repeat; Signal.
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4 x APPROXIMATE REPEATS.
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P-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; L13462; AAC37307.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
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2-1.
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Matches 62; Conservative
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                                                                                                                                                                                                 MEDLINE-88273584; PubMed-2455736;
Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.M.;
"Isolation and characterization of expression cDNA clones encoding
antigens of Onchocerca volvulus infective larvae.";
J. Clin. Invest. 82:262-269(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster (Fruit fly).
Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Perryota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophillade; Drosophila.
[1]
MEDLINE-94341871; PubMed=7520419;
MEDLINE-94341871; PubMed=7520419;
Rokeach L.A., Zimmerman P.A., Unnasch T.R.;
"Epitopes of the Onchocerca volvulus RALI antigen, a member of the "Epitopes of the Onchocerca volvulus racionation family of proteins, recognized by sera from patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 19; DB 1; Length 388;
Pred. No. 5.8e-12;
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9537F298A2D31CD6 CRC64;
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4 X APPROXIMATE REPEATS.
1-1.
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P29413; Q9VHA3;
01-APR-1993 (Rel. 25, Created)
01-OCT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
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PRINTS; PRO0626; CALRETICULIN.
PRODOM; PD0010866; CALRETICULIN.1.
PROSITE; PS00803; CALRETICULIN.2; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
CALCIUM-Dinding; REPERTICULIN.2; 1.
17 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M20565; AAA59056.1; -.
PIR; A32507; A32507.
Interpro; IPR001580; Calreticulin.
Pfan; PF00262; calreticulin; 1.
                                                                                                                                        Infect. Immun. 62:3696-3704(1994).
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100.08; Pre
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                                                                                                                                                                                     SEQUENCE OF 53-388 FROM N.A.
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189
2208
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242
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388 AA;
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nes 19; Conserv
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REPEAT
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                                                                                                                                                                                                                                                          MEDLINE-91201375; PubMed-2016321; Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L., Vance J.E., Opas M., Michalak M.: in the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic reticulum.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                     TISSUE-Small intestine;
MKDLINE-96327607; PubMed-8672129;
Winteroo A.K., Fredholm M., Davies W.;
"Evaluation and Characterization of a porcine small intestine CDNA 11brary: analysis of 839 clones.";
Mamm. Genome 7:509-517(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Onchocerca.
NCBI_TaxID=6282;
                                                                                                                                                                                                                                                                                                                                                                                                         J. Biol. Chem. 266:7155-7165(1991).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM, THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
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  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Mammalla; Eutherla; Cetartiodactyla; Suina; Suidae; Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -i- SUBUNIT: MONOMER (BY SIMILARITY).
-i- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-i- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              105 105
105 AA; 11958 MW; D203B53FE36BDE1E CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RALI_ONCVO STANDARD; PRT; 388 AA. P11012; 01-JUL-1989 (Rel. 11, Created) 01-JUL-1995 (Rel. 32, Last sequence update) 01-OCT-1996 (Rel. 34, Last annotation update) RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam: PF00262; calreticulin; 1.
Probom; PP001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; PARTIAL.
PROSITE; PS00804; CALRETICULIN_2; PARTIAL.
PROSITE; PS00805; CALRETICULIN_ERPEAT; PARTIAL.
Endoplasmic reticulum; Calcium-binding; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR; B33208; B33208.
InterPro; IPR001580; Calreticulin.
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les 25; Conserv
                                                                                                                                                                                                                                                SEQUENCE OF 18-32.
                                                                                    SEQUENCE FROM N.A.
                                        WCBI_TaxID-9823;
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SEQUENCE
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DE RALL O
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Gaps

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PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.

InterPro; IPR001580; Calreticulin. InterPro; IPR000886; ER_target. Pfam; PF00262; calreticulin; 1. PRINTS; PRO0626; CALRETICULIN. ProDom; PD001866; Calreticulin; 1.

EMBL; AE003683; AAF54416.1; PIR; A37158; A37158. FlyBase; FBgn0005585; Crc. CALRETICULIN. G -> A (IN REF. 3). V -> L (IN REF. 3). ; 65D72C69D0BEC427 CRC64;

46808 MW;

CONFLICT CONFLICT SIGNAL

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RA Addms N. D.

RC STRAIN-BERKELEY.

RA Addms N. D., Celniker S. E., Holt R. A., Evans C. A., Gocayne J. D.,

RA Addms N. D., Celniker S. E., Holt R. A., Evans C. A., Gocayne J. D.,

RA Addms N. D., Celniker S. E., Holt R. A., Hoskins R. A., Galle R. F.,

Rocorge R. A., Lewis S. E., Richards S., Ashburner M., Henderson S. N.,

Batton G. G., Wortman J. R., Yandell M. D., Zhang Q., Chen L. X.,

Brandon R. C., Baxter E. G., Helt G., Nelson C. R., Miklos G. L. G.,

RA Baltew R.M., Basu A., Barter E. G., Helt G., Nelson C. R., Miklos G. L. G.,

RA Baltew R.W., Basu A., Barker E. G., Helt G., Nelson C. R., Miklos G. L. G.,

RA Baltew R.W., Basu A., Buck J. Brandari D., Bolshakov S.,

RA Baltew R.W., Baus A., Buck J. Brokstein P., Brothter P.,

Borkova D., Botchan M. R., Bouck J., Brytaktaroglu L., Basilay E. M.,

Borkova D., Botchan M. R., Bouck J., Brokstein P., Brothter P.,

RA Burtis K. C., Busam D. A., Buller H., Cadieu E., Center A., Chandra I.,

RA Cawley S., Dahlke C., Perraz C., Ferriera S., Pleischmann W.,

RA Baris N. L., Marvey D., Helman T. J., Hernandez J. R., Houck J.,

RA Harris N.L., Harvey D., Helman T. J., Hernandez J. R., Houck J.,

RA Harris N.L., Harvey D., Helman T. J., Well M., Ingelman C.,

A Jalali M., Kallush F., Karpen G. H., Ke Z., Kulp D., Lai Z.,

RA Harris N.L., Marvey D., Helman T. J., Well M., Nelson D. L.,

RA Harris N.L., Marvey D., Hourby B., Murphy L., Muzny D.M., Nelson D.L.,

RA Harris N.L., Marvey D., Kartf C., Kravitz S., Kulp D., Lai Z.,

Rasko P., Lei Y., Levitsky A.A., Liu J., Li J., Li Z., Liang Y., Lin X.,

RA Hourt S.M., Moy W., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,

RA Hourt S.M., Moy W., Wurphy B., Murphy L., Muzny D.M., Nelson D.L.,

Rabloon D.K., Nelson R.A., Shapson M., Stupski M.P., Sauth H.,

Spiler E., Spradling A.C., Stapleton M., Stupski M., Saugki M., Sangth H.O.,

RA Henger S., Spradling A.C., Stapleton M., Stupski M., Stupski M., Sandth H.O.,

RA Heng X.H., Zhong F.W., Zhong W., Wurphy S., Ranger S., Saulth W., Stupski M., Stapl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-90307981; PubMed-2365822;
McCauliffe D.P., Zappi E., Lieu T.S., Michalak M., Sontheimer R.D.,
                                                                                                                                                              "Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin homologue.";
DNA Seq. 3:247-250(1992).
                                                             SEQUENCE FROM N.A.
MEDLINE-93208374; PubMed-1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 91-124 AND 182-220.
NCBI_TaxID-7227;
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DB 1; Length 406; 6e-12;
                                  0; Indel's
 10.6%; Score 19; DB
100.0%; Pred. No. 6e-
tive 0; Mismatches
                                                                                                                                                                           Search completed: January 14, 2002, 08:51:32
Job time: 118 sec
                                                                     113 IMFGPDICGPGTKKVHVIF 131
                                                                                       130 IMFGPDICGPGTKKVHVIF 148
Query Match
Best Local Similarity 100.0
Matches 19; Conservative
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EMBL; X64461; CAA45791.1; -.

"A fuman Ro/SS-A autoantigen is the homologue of calreticulin and highly homologous with onchocercal RAL-1 antigen and an aplysia ". memory molecule" ". 322-335(1990).

-1. Clin. Invest. 86:332-335(1990).

-1. FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-ENDING SITES.

-1. SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

-1. SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.

Capra J.D.;

Title: Perfect score:

Sequence:

OM protein

Run on:

Scoring table:

Word size

Searched:

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01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN.
Aplysia californica (California sea hare).
Eukaryota, Metazoa, Mollusca, Gastropoda, Opisthobranchia, Anaspidea,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=93098937; PubMed=1463604; Kendel E.R.; Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.; Konnedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.; Long-term sensitization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein."; Neuron 9:1013-1024(1992).

EMBL: 55129; AABZ4569:1; -. InterPro; IPR000886; ER_target.

InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                Houen G., Koch C.;
Human placental calreticulin: purification, characterization and
association with other proteins ";
Acta Chem. Scand. 48:905-911(1994).
Interpro; IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; 3.
Probom; PD001866; Calreticulin; 1.
                                                                                Homo sapiens (Human).
Bustaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBL_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 15.0%; Score 27; DB 4; Length 214; Best Local Similarity 100.0%; Pred. No. 4e-21; Matches 27; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSTE; PR00803; Calreticulin; 1.
PROSTE; PS00803; CALRETICULIN_1; 1.
PROSTE; PS00805; CALRETICULIN_2; 1.
PROSTE; PS00805; CALRETICULIN_2; 1.
PROSTE; PS008065; CALRETICULIN_EPEPAT; 3.
PROSTE; PS008014; ER_TARGET; UNROWN_1.
SEQUENCE 405 AA; 46738 MW; 14CAA201840D1D69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                        AC9269459C1356BE CRC64;
            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN-CALCIUM BINDING PROTEIN (FRAGMENTS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           405 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EPAVYFKEQFLDGDGWTSRWIESKHKS 27
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                                                                                                                                                                                  MEDLINE=95143082; PubMed=7841019;
                                                                                                                                                                                                                                                                                                                                                                                                                        24341 MW;
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60
79
117
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NCBI_TaxID=6500;
                                                                                                                                                                                                                                                                                                                                                                                   116
214
214 AA;
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NON_CONS
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NON_CONS
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SEQUENCE
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Q26268
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                                                                                                                               (without alignments)
1121.338 Million cell updates/sec
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Q16893 amblyomma a
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Q91710 xenopus lae
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O26268 aplysia cal
Ogu6s0 strongyloce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                            EPAVYFKEQFLDGDGWTSRW.....PDNTYEVKIDNSQVESGSLE 180
                                                                                                              ; Search time 23.48 Seconds
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              GenCore.version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                 473505 seqs, 146272329 residues
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                                                                                                              January 14, 2002, 08:50:09
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    protein search, using sw model

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Gapop 60.0 , Gapext 60.0
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Q9U916
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sp_invertebrate:*
sp_mammal:*
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sp_phage:*
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Maximum DB seq length: 200000000
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sp_bacteria:*
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Match Length
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Database :

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Gaps

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15.0%; Score 27; DB 5; Length 405; 100.0%; Pred. No. 6.8e-21; ative 0; Mismatches 0; Indels

Query Match Best Local Similarity 100. Matches 27; Conservative

214 AA.

PRT;

PRELIMINARY;

Q9UDG2

RESULT Q9UDG2 ID Q9

Score

Result Š 2222227

RESULT Q906S0

8

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Gaps

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Query Match 13.9%; Score 25; DB 13; Length 318; Best Local Similarity 100.0%; Pred. No. 8.4e-19; Matches 25; Conservative 0; Mismatches 0; Indels
                                                                                                                 NON_TER 1 1 1 SEQUENCE 318 AA; 36997 MW; C88102EA1CAC1506 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       016893 PRELIMINARY; PRT; 410 AA. 016893; 0.100V-1996 (TrEMBLrel. 01, Created) 01-JAN-1999 (TrEMBLrel. 09, Last sequence update) 01-JAN-2001 (TrEMBLrel. 17, Last annotation update)
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Best Local Similarity 100.0%; Pred. No. 1...
                           PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Insect Physiol. 41:369-375(1995)
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                                                                                                                                                                                                                                                                                                                                                         113 IMFGPDICGPGTKKVHVIFNYKGKN 137
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                           29 IMFGPDICGPGTKKVHVIFNYKGKN 53
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TISSUE=SALIVARY GLANDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amblyomma americanum.
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CRT-1.
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Q91711;
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Q91711
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Q16893
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                                                                                                                                                                                                                                                                                                                                                                                        Strongylocentrotus purpuratus (Purple sea urchin).
Rukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinacea; Echinoidea; Strongylocentrotidae;
Strongylocentrotus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just W.L., Lennarz W.J.;

*Cloning and Characterization of AlphaP Integrin and Calreticulin in Embryos of the Sur Drchin.*;

Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF177915; AAD55725.1;

InterPro; IPR0109886; ER_target.

InterPro; IPR010886; Calreticulin.

PRINTS; PR00262; Calreticulin; 1.

PRINTS; PR00666; CALRETICULIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
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15.0%; Score 27; DB 5; Length 421;
Begt Local Similarity 100.0%; Pred. No. 7e-21;
Matches 27; Conservative 0; Mismatches 0; Indels
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172C664F59F41F93 CRC64;
                                                                                                                                                                                                                                                             01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNW-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
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PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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111 YNIMFGPDICGPGTKKVHVIFNYKGKN 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
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Interpro; IPR000886; ER_target.
Interpro; IPR001580; Calreticulin.
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CHAIN 20 421
SEQUENCE 421 AA; 48822 MW;
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09PTX7;
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                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 49-410 FROM N.A.
TISSUE-SALIVARY GLANDS;
JAWNISKI D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
NCBI_TaxID=6943;
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15.3 TISSUE-SALIVARY GLANDS;
16.4 Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
17.5 EMBL; U07708; AAC79094.1;
18.4 InterPro; IPR001866; ER.target.
18.6 From: PR00262, Calreticulin.
19.7 PR00262, Calreticulin.
19.8 PRONTE; PR00626; CALRETICULIN.
19.9 PROSITE; PS00803; CALRETICULIN.
19.1 PROSITE; PS00803; CALRETICULIN.
19.1 PROSITE; PS00805; CALRETICULIN.
10.1 PROSITE; PS00805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13.3%; Score 24; DB 5; Length 410; 100.0%; Pred. No. 1.3e-17;
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Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases.
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AND SERVICE SE

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151 FTHLYTLIVRPDNTYEVKIDNS 172
                                                                                                       163 FTHLYTLIVRPDNTYEVKIDNS 184
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111 YNIMFGPDICGPGTKKVHVIF 131
             48344 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1997 (TrEMBLrel. 02, 01-FEB-1997 (TrEMBLrel. 02, 01-JUN-2001 (TrEMBLrel. 17,
                                             Query Match
Best Local Similarity 100.0
Matches 22; Conservative
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Matches 21; Conservative
                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                Dirofilaria immitis.
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19 3
387 AA;
   13 4
411 AA;
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   CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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Q98984
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
CALRETICULIN (FRAGMENT).
Endopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                    Ireves S., Zorzato F., Pozzan T.;
"Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                ;
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                                                                                                                                                                                                                                                                                                                     343 AA; 40105 MW; 3E7DDAFA33B91DE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS, PRO0626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
PROSITE; PS008014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                             ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X67597; CAA47866.1; ...
InterPro; IPR000886; Extraget.
InterPro; IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                   Biochem. J. 287:579-581(1992).
EMBL; X67598, CAA47867.1; -
InterPro; IPR001580; Calreticulin.
Pfam: PF00262; calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-BRAIN;
MEDLINE-93074997; Pubmed-1445218;
                                                                                                                                       MEDLINE-93074997; PubMed-1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CALRETICULIN PRECURSOR (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                      151 FTHLYTLIVRPDNTYEVKIDNS 172
                                                                                                                                                                                                                                                                                                                                                                                                                   140 FTHLYTLIVRPDNTYEVKIDNS 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. 287:579-581(1992).
                                                                                                                                                                                                                                  PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                              22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12
                                                                               Xenopodinae; Xenopus.
NCBI_TaxID=8355;
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                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
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                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                               TISSUE-BRAIN;
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NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             system.";
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NON_TER
SIGNAL
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MEDLINE=9909497; Pubhed=9879888;

MEDLINE=99094497; Pubhed=9879888;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Tilarial parasite Dirofilaria immitis.";

Mol. Biochem. Parasitol. 97:69-79(1998).

REMBL; AF052978; AAD03405.1;

REMBL; AF052978; AAD03405.1;

REMBL; PR00262; calreticulin.

Prim; PR00262; calreticulin; 1.

REMINS; PR00626; Calreticulin; 1.

REMINS; PR00626; Calreticulin; 1.

REMINS; PR00626; Calreticulin; 1.

REMINS; PR00803; CALRETICULIN.2; 1.

REMINSTE; PS000804; CALRETICULIN.2; 1.
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MEDLINE=96234004; PubMed=8654561;
Yamamoto S., Nakamura M.;
Calnexin: its molecular cloning and expression in the liver of the frog, Rana rugosa.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Dirofilaria.
NCBI_TaxID=6287;
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                                                                                                    Length 411;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18 POTENTIAL.
387 CALRETICULIN.
44941 MW; E7741BF6AAFA5885 CRC64;
CALRETICULIN.
; 891DA66E00EBBEFA CRC64;
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-UNN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                    DB 13; I
1.9e-15;
                                                                                12.2%; Scc. 100.0%; Pred. No. ...
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Search completed: January 14, 2002, 08:52:02 Job time: 113 sec
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Sukaryota: Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocarcidae; Litomosoides.
NCBI_TaxID-42156;
                                                                                                                                                                "Strong expression of the calreticulin gene in the liver of Rana rugosa radpoles.";
J. Exp. Zool. 0:0-0(1996).
ENBL; D78589; BAA11425.1; -.
ENBL; D78589; BAA11425.1; -.
InterPro; IPR001886; Exterget.
InterPro; IPR001880; Calreticulin.
Pfam; PF00262; Calreticulin; 1.
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SEQUENCE FROM N.A.
SUBMITTED (SEP-1997) to the EMBL/GenBank/DDBJ databases.
NABL; AJO01621; CAA04877.1; -
INTERPRO; IPRO01580; Calreticulin.
PEAM; PRO0262; Calreticulin.
PRODAM; PRO01865; Calreticulin.
PRODAM; PRO01865; Calreticulin. 1.
PROSITE; PRO01865; CALRETICULIN.
PROSITE; PRO01805; CALRETICULIN.;
PROSITE; PRO01805; CALRETICULIN. REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20; DB 13; Length 419;
Pred. No. 3e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 375;
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100.0%; Pred. No. 3.3e-12;
11ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2C857036769673BF CRC64;
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Last sequence update)
Last annotation update)
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01-JAN-1998 (TremBirel. 05, Last sequence update)
01-JUN-2001 (TremBirel. 17, Last annotation update)
RAL-1 PROTEIN (FRAGMENT).
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PRODOM; PD001866; CALRETICCLIN.
PROSITE; PS00804; CALRETICULIN.1; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.EPERT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN.1.
SEQUENCE 419 AA, 48658 MW; 2C857036769
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100.0%; Pre
0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153 HLYTLIVRPDNTYEVKIDNS 172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     113 IMFGPDICGPGTKKVHVIF 131
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FEBS Lett. 387:27-32(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 100.0
Matches 20; Conservative
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                                                                                    SEQUENCE FROM N.A.
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18478
AC 018478;
DT 01-JAN-
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Q9U916
ID Q9U916
AC Q9U916
DT 01-MAY.
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Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pteryyota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10.6%; Score 19; DB 5; Length 406; 100.0%; Pred. No. 3.5e-12; Live 0; Mismatches 0; Indels
                                                                                                                                                                         Dodo K., Sakoyama Y., Gamo S.;
"Drosophila melannogaster calreticulin for mRNA.";
"Drosophila melannogaster calreticulin for mRNA.";
Submitted (Jan.1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AB000718; BAA85379.1;
FlyBass; FBG0005585; Crc.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                               PRINTS, PRO0626; Calreticulin; 1, PRINTS; PRO0626; Calreticulin; 1, PRO0618; PRO0626; Calreticulin; 1, PROSITE; PRO0803; Calreticulin; 1, PROSITE; PSO0803; Calreticulin, 1, PROSITE; PSO0805; Calreticulin, 2; 1, PROSITE; PSO0805; Calreticulin, REPEAT; 3, PROSITE; PSO0014; ER_TARGET; UNKNOWN, 1, SEQUENCE 406 AA; 46809 MW; 68BA49A6B81CC427 CRC64;
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Best Local Similarity 100.C
                                                                                                                                          SEQUENCE FROM N.A.
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Human prostate can Human secreted pro Human secreted pro

Human Endoplasmic

Title: Perfect score:

Sequence:

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Run on:

Scoring table:

Searched:

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Database

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Inhibiting endothelial cell growth and angiogenesis using calreticulin,
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eutroprotective; antidiabetic; cytostatic; dermalogical; hepatic;
immunosuppresive; antiinflammatory; anti-atherosclerotic;
gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human vasostatin (calreticulin N-terminal 180 amino acids).
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AAG24608
AAG47932
AAG24607
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                                  AAG47931
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  99WO-US23240
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 WO200020577-A1.
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Synthetic.
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  RESULT
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160.255 Million cell updates/sec
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60 kD Ro (Ro/SSA)
Human MBP-calretic
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Calreticulin. Hom
Flea calreticulin
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Castor bean calret
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                                                                                                                   US-09-828-000-3
971
1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
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'SIDSB/ggdata/geneseq/geneseqp/AA1986_DAT:*
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2: /SIDSB/gcgdata/geneseq/geneseqp/AA1981.DAT:*
3: /SIDSB/gcgdata/geneseq/geneseqp/AA1982.DAT:*
4: /SIDSB/gcgdata/geneseq/geneseqp/AA1983.DAT:*
5: /SIDSB/gcgdata/geneseq/geneseqp/AA1983.DAT:*
            GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                 522463 seqs, 74073290 residues
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Maximum Match 100%
Listing first 45 summaries
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AAR12312
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AAB66343
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AAP92276
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AAY00927
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AAW04171
                                                      protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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DB seq length: 200000000
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Match
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                                                                                                     contacting the cells with calrecticulin (or its fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The amethod may be used for inhibiting anglogenesis in a patient. The anglogenesis is ussociated with a disease other than a tumor that is associated with a convecuentiation (e.g. disbetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas immune inflammation, atherosciarosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatical arthitis, systemic lupus erythromatosus, thyroiditis, systemic lupus erythromatosus, thyroiditis, and show a secoldosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially known (claimed).
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                                                                                       novel method of inhibiting endothelial cell growth comprises
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Pred. No. 3.1e-99;
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useful for suppressing tumor growth
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                                          Claim 4; Page 82; 99pp; English
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N-PSDB; AAA09346, AAA09347.
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A contesticulin (see AAY92349) without the 17 N-terminal amino acids.

A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, numnume inflammation, atheroscierosis, excessive wound repair, retinal neovascularization, disease, non-immune inflammation, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, remanding arthritis, systemic lupus erythromatosus, thyroiditis, goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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                                                                                                                                                                Recombinant human MBP-calreticulin comprises the sequence of human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 971; DB 21;
100.0%; Pred. No. 9.4e-99;
tive 0; Mismatches 0;
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                                                                                                   Claim 4; Page 80-81; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89WO-US01213.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kaposi's sarcoma (claimed)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 180; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1989-309537/42.
N-PSDB; AAP92276.
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Best Local Similarity
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WO9907406-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                      28-MAY-1999
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                                                                                                                                                                Sequence
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                                         Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                                          MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                 61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                            121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                              Gaps
                                                                                                                                                              1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                        IA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen
used in immunoassays to detect rheumatic disease
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                                                                                                                           Length 417;
                                                                                                                                             Indels
                                                                                                                          100.0%; Score 971; DB 10; 100.0%; Pred. No. 9.9e-99;
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                                                                                                                                           0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label- mature_protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
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                           2; 88pp; English.
                                                                                                                                                                                                                                                                                                    AAY92349 standard; Protein; 417
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                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                         Human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-303767/26
                                                                                                                                   Similarity
                                                                                               417 AA;
                          Disclosure; Fig
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                                                                                                                                   Best Local Si
Matches 180:
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                                                                              antigens.
                                                                                                Sequence
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Contacting the cells with calreticulin (or its fragments/variants).

Contacting the cells with calreticulin (or its fragments/variants).

Cragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, systemic lupus erythromatosus, thyroiditis, goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, contact lens used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18 epavyfkegfldgdgwtsrwleskhksdfgkfvlssgkfygdeekdkglqtsgdarfyal 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
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Best Local Similarity 100.0%; Pred. No. 9.9e-99;
Matches 180; Conservative 0; Mismatches 0;
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12-DEC-1996
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                                               Sequence
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                    This sequence is calreticulin, a homologue of Clq and collectin receptor (CC1qR). The invention relates to the use of a cClqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit cub functionality. The cClqR binding domain, or its inhibitor, can be used to freat a human or animal body. Particularly an inhibitor, can be used to complement activation involved in the initiation and maintenance of inflummation, for example in myocardial infarction, brain isobaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus erythematous, burns, immune complex nephritis, and to treat amyloid plaques in Alzhaimer's diasease. The use of cClqR binding domain or inhibitor, enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is calreticulin. It and a C-domain derived peptide (AAN06736) are useful for treating a patient to inhibit restenosis. The
                                                                                                                                                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                          SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                 1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                            Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
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                                                                                                                                                                                                         Length 417;
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                                                                                                                                                                                                       Score 966; DB 20;
Pred. No. 3.5e-98;
0; Mismatches 1;
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Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                          AAW11156 standard; peptide; 401 AA
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                                                                                                                                                     .ow molecular weight molecule.
                                                                                                                                                                                                       Query Match
Best Local Similarity 99.4%;
Matches 179; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lucas A, Michalak M;
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                                                                                                                                                                        417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Culreticulin
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calreticulin-type opds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
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Its amino acid sequence was deduced from a cDNA clone (AAT39516) obtd. from a salivary gland cDNA library. Recombinant PCtCal1589 can be produced in host calls transformed with a vector carrying calreticulin nucleic acids. Calreticulin alters the blood feeding behaviour of haematophagous insects and can be administered to an animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Haematophagous insect calreticulin protein - used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                                                                                                     SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
                                                                                                                                                                                                   Length 401;
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                    8
                                                                                                                                                                                              Score 921; DB 18;
Pred. No. 3.1e-93;
                                                                                                                                                                                                                          Pred. No. 3.1e
1; Mismatches
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95.0%;
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                                                                                                                                                                                              Query Match 94.9°
Best Local Similarity 95.0°
Matches 171; Conservative
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                                                                                                                401 AA;
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N-PSDB; AAT39517.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The polynucleotide sequences given in AAC55190 to AAC55235 encode the human secreted proteins given in AAB32371 to AAB32484. Human secreted proteins have activities based on the tissues and cells the genes are expressed in. Examples of activities include: cytostatic; immunostimulant; antiproliferative; cardiant; antiarrhyfninc; antiviral; antibroliferative; antiproprotective; nootropic; antilnflammatory; antianglogenic; anti-HIV; and antiarteriosclerotic. The
                                                                                                                                                                                                                                                                                                                                                     Human; secreted protein; cytostatic; immunostimulant; antiproliferative; cardiant; antiarrhythmic; antiviral; antibacterial; antifungal; cancer; antipastitc; neuroprotective; nootropic; antimiflammatory; anti-HIV; antiamingiogenic; antiarteriosclerotic; diagnosis; immune disorder; AIDS; autoimmune disease; heamatopoletic cell disorder; blood protein disorder; agammaglobulinaemia; hyperproliferative disease; Gaucher's disease; ardiovascular disorder; congenital heart defect; pulmonary atresia; arrhythmia; ischaemia; anglogenesis related disorder; Crohn's disease; atrhythmia; ischaemia; anglogenesis related disorder; Crohn's disease; Huntington's; infectious disease; cat-scratch disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New human nucleic acids encoding secreted proteins, useful in the treatment, prevention or diagnosis of immune disorders (e.g. autoimmune diseases), blood protein disorders and hyperproliferative diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Moore PA;
                                                                                                                                         SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                            121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                         Gaps
                                                                              2 PAVYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                            Human secreted protein sequence encoded by gene 15 SEQ ID NO:71.
                                                         .;
?;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Soppet DR,
                                 Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Young PE, Ni J, Soppet DR, Florence KA, Komatsoulis G;
                                                         Indels
                                                         26;
                                  DB 17;
                                            7.8e-69;
                                 Score 700; DB
Pred. No. 7.8e
23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 434-435; 488pp; English.
                                                                                                                                                                                                                                                             AAB32385 standard; Protein; 385 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ebner R,
Olsen HS,
                               72.1%;
71.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-FEB-2000; 2000WO-US03062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0119468
                                                                                                                                                                                                                                                                                                          16-JAN-2001 (first entry)
                                             Best Local Similarity 71.7
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaucher's disease)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lafleur DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-543578/49
                                            Similarity
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403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-AUG-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CA,
Sequence
                                                                                                                                                                                                                                                                                    AAB32385;
                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rosen
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AAB32385
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polynuclectides and polypeptides, or their agonists and antagonists, can be used for treating. proventing or attacting in the used for treating.
                                         be used for treating, preventing or diagnosing immune disorders (e.g. cancer, autoimmune diseases), disorders of haematopoietic cells, blood protein disorders (e.g. agammaglobulinaemia), hyperproliferative diseases (e.g. Gaucher's disease), cardiovascular disorders (e.g. congenital heart defects, pulmonary arresia, arrhythmias, ischaemia), angiogenesis related disorders (e.g. Crohn's disease, atherosclerosis), encurological diseases (e.g. Alzheimer's disease, Huntington's chorea), infectious diseases (e.g. Alzheimer's cart-scratch disease and other bacterial, viral, parasitic or fungal diseases).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64 FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141 ikkvhv11hfknkyhenkklirckvdqfthlyt1i1rpdlsydvkidqqsiesgsie 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                        DB 21; Length 385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                      65.0%; Score 631; DB 21;
llarity 64.4%; Pred. No. 3e-61;
Conservative 30; Mismatches 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160..166
/label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      195..201
/label= repeat unit
/note= "hydrophilic"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR12312 standard; Protein; 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYHO-) UNIV HOSPITALS CLEV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88US-0214264
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1991-185179/25.
N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
hes 114; Conser
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                                                                                                                                                                                                                                                                                                                                                385
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                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR12312;
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Matches
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The sequence was deduced from a cDNA clone lambda RAL-1 prepd.

from RNA isolated from nodules excised from patients infected
with 0. volvulus. The N-terminal is incomplete, however Abs
which specifically bind to protein prepd. from induced cultures
of lambda RAL-1 lysogens recognise a single polypeptide of mol.
wt. 42.000 in extracts of adult worms. Analysis deduced sequence
suggests that it encodes a protein of mol. wt. 39.130. If the
antigen is not subject to post-translational processing this
suggests that most of the coding sequence is present. The three
crepeats are highly hydrophilic regions likely to be exposed on
the surface of the antigen and highly immunogenic. Recombinant
antigen expressed by the clone can be used stimulate T-cells of
individuals infected by the parasite to proliferate and may be
used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Custor bean; calreticulin; calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98 NSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39 FYGDEEKDKGLQTSQDARFYALSASFE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFP 97
DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                             DB 12; Length 336;
                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                          55.8%; Score 541.5; DB 12;
68.5%; Pred. No. 1.9e-51;
1ve 21; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Castor bean calreticulin SEQ ID NO: 2.
                                                             Disclosure; Fig 7; 20pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158 IVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB66341 standard; Protein; 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PION-) PIONEER HI-BRED INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     calnexin; promoter; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-0675816
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                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 68.5
Mutches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Coughlan SJ, Winfrey RJ;
                                                                                                                                                                                                                                                                                                                                                336 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ricinus communis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US6171864-B1
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New nucleic acid molecules encoding a calcium binding chaperone protein

N-PSDB; AAF29741, AAF29742.

WPI; 2001-122335/13.

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Gaps

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                                                                              The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New nucleic acid molecules encoding a calcium binding chaperone protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum; calnexin; promoter; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells
                                                                                                                                                                                                                                                                                                                                                      4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                       22 vffeerf--edgwenrwvksdwkkdentagewnytsgkwngd-pndkgigtsedyrfyal 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
9
                                                                                                                                                                                                                                                                                                                      43; Indels
                                                                                                                                                                                                                                                                                     DB 22;
                                                                                                                                                                                                                                                                                     54.3%; Score 527; DB 23
55.3%; Pred. No. 1e-49;
                                                                                                                                                                                                                                                                                                                     31; Mismatches
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                                                Claim 1; Fig 3; 45pp; English.
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                                                                                                                                                                                                                                                                                                     l Similarity 55.3
99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Castor bean calreticulin.
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                                                                                                                                                                                                                                    415 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ricinus communis.
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                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                     Query Match
Best Local Si
Matches 999
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                                                 990S-0135124
990S-0135529.
990S-0135629.
990S-0136392.
990S-0136392.
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990S-0137528.
990S-0137524.
990S-0138094.
990S-0138847.
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990S-0144335.
990S-0144352.
990S-0144632.
990S-0144884.
990S-0145088.
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                                                                                                                                                                                                                                   SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                             Gaps
promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the andoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                  4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                        121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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                                                                                                                Length 415;
                                                                                                                                          43; Indels
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                                                                                                              54.3%; Score 527; DB 22;
55.3%; Pred. No. 1e-49;
Live 31; Mismatches 43;
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99US-0123548.
99US-0125788.
99US-0126264.
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99US-0129845.
99US-0130077.
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99US-0132484.
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990S-0132863.
990S-0134256.
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990S-0134219.
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99US-0130891
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99US-0132048
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                                                                                                                                         99; Conservative
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                                                                                                              Query Match
Best Local Similarity
                                                                          415 AA;
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05-MAR-1999;
23-MAR-1999;
25-MAR-1999;
25-MAR-1999;
06-APR-1999;
06-APR-1999;
16-APR-1999;
16-APR-1999;
16-APR-1999;
16-APR-1999;
21-APR-1999;
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07-MAY-1999;
11-MAY-1999;
14-MAY-1999;
14-MAY-1999;
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06-MAY-1999,
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                                                                                                                                                                                                                                                                                                                                                                                 136
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                                                                                                                                                                                             Length 421
                                                                                                                                                                                                                                 47; Indels
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                                                                                                                                                                                         52.5%; Score 510; DB 21;
53.9%; Pred. No. 7.8e-48;
1ve 30; Mismatches 47;
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990S-0161405.
990S-0161406.
990S-0161369.
990S-0161361.
990S-0161320.
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25-OCT-1999;
26-OCT-1999;
26-OCT-1999;
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28-OCT-1999;
28-OCT-1999;
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Matches
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23-JUL-1999;
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990S-0123180.
990S-0123180.
990S-0125788.
990S-0126785.
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Nos 97; Conservative
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05-MAR-1999;
09-MAR-1999;
23-MAR-1999;
25-MAR-1999;
06-APR-1999;
06-APR-1999;
16-APR-1999;
13-APR-1999;
23-APR-1999;
                            25-0CT-1999,
26-0CT-1999,
26-0CT-1999,
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28-0CT-1999,
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28-0CT-1999,
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28-APR-1999;
30-APR-1999;
04-MAY-1999;
05-MAY-1999;
06-MAY-1999;
07-MAY-1999;
17-MAY-1999;
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990S-0123180.
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99US-0132863
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                                                                                                                                                                                                                Similarity
 22-0CT-1999;
25-0CT-1999;
25-0CT-1999;
26-0CT-1999;
26-0CT-1999;
28-0CT-1999;
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28-0CT-1999;
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01-APR-1999;
06-APR-1999;
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30-APR-1999;
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21-APR-1999;
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PR 27-JUL-1999; 99US-0145918.

PR 27-JUL-1999; 99US-0145918.

PR 28-JUL-1999; 99US-0145918.

PR 28-JUL-1999; 99US-0145918.

PR 28-JUL-1999; 99US-014538.

PR 02-AUG-1999; 99US-0147202.

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PR 03-AUG-1999; 99US-0147203.

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PR 13-AUG-1999; 99US-0144733.

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PR 23-AUG-1999; 99US-015108.

PR 23-AUG-1999; 99US

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Search completed: January 9, 2002, 15:01:12 Job time: 158 sec

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Best Local Similarity 55.3%
Matches 99; Conservative
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Copyright (c) 1993 - 2000 Compugen Ltd.
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US-08-991-408-5

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US-08-940-6448-20

US-08-940-6448-21
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Maximum Match 100%
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Match Length
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Perfect score:
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Sequence 2, Application US/08675816

Patent No. 6171864

PERENT INFORMATION:

APPLICANT: COUGHLAD, Sean J.

APPLICANT: Winferby Jr., Ron J.

TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US

CORRESPONDENCE: 16

CORRESPONDENCE: 16

CORRESPONDENCE: 16

CORRESPONDENCE: 16

COMPUTER READABLE FORM:

MEDIUM TYPE: PLOPPY disk

COMPUTER READABLE FORM:

MEDIUM TYPE: PAID 1996

CLASSIFICATION NUMBER: 99,317

APPLICATION NUMBER: 99,317

REFERENCE/COCKET NUMBER: 750027,401

TELECOMMUNICATION INFORMATION:

NAME: (2061-682-6031

INFORMATION FOR SEQ ID NO: 2

SEQUENCE CHARACTERISTICS:

LENGTH: 415 amino acids

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THERE TO THE TOPPICATION

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:
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TITLE OF INVENTION: PROTEIN TRAFFICKING DISORDERS AND INCREASING SECRETORY
TITLE OF INVENTION: PROTEIN PRODUCTION
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
53 QDARFYALSASF-EPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPN----SLDQTDMHG 107
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MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: Elb PC compatible
COMPUTER: TEM PC compatible
OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-AUG-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Decir, Manya S.
REGISTRATION NUMBER: 37,120
REFERENCE/POCKET NUMBER: 690066.401C1
TELECOMMULCATION:
                                                                                                                                                                                                                        ; Sequence 2, Application US/08296362; Patent No. 5691306; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242 ILNPDNSFEILVDQSIVNSGNL 263
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                                                                                                                                                                                                                                                                                        APPLICANT: Bergeron, John J.M. APPLICANT: Thomas, David Y. APPLICANT: Wada, Ikuo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH. 593 Amino acids
TYPE: mmino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: protein US-08-296-362-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seattle
: Washington
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                                                                                                                                                                                                   US-08-296-362-2
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APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149 -AINKYHFILKHKNPKSGEYIEHHLKYPPSVPSDKLTHVYTAILKPDNELRILVDGEE 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17;
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APPLICANT: Melanie K. Spriggs, Michael R. Comeau,
APPLICANT: Melanie K. Spriggs, Michael R. Comeau,
APPLICANT: Melanie K. DuBose, ALChard S. Johnson
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
TITLE OF INVENTION: RECEPTOR DNA AND POLYPEPTIDES
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Janis C. Herry
STREET: 51 University St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23.4%; Score 227.5; DB 436.0%; Pred. No. 2.2e-17, tive 24; Mismatches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY AGENT INFORMATION:
NAME: No. 6171864 tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027.401
TELECOMMUNICATION INFORMATION:
TELEFAX: (206)-682-6031
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                        TITLE OF INVENTION: CALRETICULIN AND NUMBER OF SEQUENCES: 16 CORRESPONDENCE ADDRESS: ADDRESSE: Seed and Berry STREET: 701 Fifth Ave. Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 8, Application US/09181706
Patent No. 6130068
Sequence 6, Application US/08675816; Patent No. 6171864; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGIH: 542 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 23.49
Best Local Similarity 36.09
Matches 64; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; MOLECULE TYPE: protein US-08-675-816-6
                                                                                                                                                                                                                                                               CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
TOPOLOGY: linear
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ZIP: 98104-7092
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COUNTRY: U
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US-09-459-066-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        507 DS--PYSKSALCTYSMNAIKHSFSTSKLGGYTKQLPSP-------APGICL 548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42;
                                                                                                                                                                                                             APPLICATION NUMBER: US 08/958,598 (converted to a APPLICATION NUMBER: Provisional, see below)
FILING DATE: October 28, 1997
CLASSIFICATION DATA:
APPLICATION NUMBER: --to be assigned-- (USSN 08/958,598
APPLICATION NUMBER: conversion to Provisional application)
FILING DATE: October 26, 1998
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4; Length 660;
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GENERAL INFORMATION:
APPLICANT: Spriggs, Melanie
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
RÉCEPTOR DNA AND POLYPEPTIDES
              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/181,706
FILING DATE: October 28, 1998
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 9.2%; Score 89; DB 4; Best Local Similarity 20.6%; Pred. No. 0.14; Matches 41; Conservative 25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Janis C. Henry
STREET: 51 University St.
CITY: Seattle
STATE: WA
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Patent No. 6174689
                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Henry, Janis C
REGISTRATION NUMBER: 34,347
REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (206)470-4189
TELEFAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 660 antho acids
TYPE: amino acid
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609 NTIYSFDTKSKQTRSAQVD 627
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98101
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US-09-458-791-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.2%; Score 89; DB 4; Length 660; 20.6%; Pred. No. 0.14; tive 25; Mismatches 91; Indels
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APPLICANT: Spriggs, Melanie
APPLICANT: Spriggs, Melanie
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
TITLE OF INVENTION: RECEPTOR DNA AND POLYPEPTIDES
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Janis C. Henry
STRRET: 51 University St.
                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: MS-DOS/Windows 95
SOFTWARE: Word for Windows 95, 7.0a
ROPELICATION DATA:
APPLICATION DATA:
FILING DATE: 10-Dec-1999
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/958,598
FILING DATE: 28-0CT-1997
ATTORNEY/AGENT INFORMATION:

NAME: Henry, Janis C

REGISTRATION NUMBER: 34,347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY: linear; MOLECULE TYPE: protein; SEQUENCE DESCRIPTION: SEQ ID NO: 8: US-09-458-791-8
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Word for Windows 95, 7.0a
                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 2631
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OPERATING SYSTEM: MS-DOS/Windows
                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: (206)470-4189
TELEFAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 661 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Sequence 8, Application US/09459066
; Patent No. 6187909
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ZIP: 98101
COMPUTER READABLE FORM:
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Best Local Similarity 20.6%
Matches 41; Conservative
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MEDIUM TYPE: Floppy
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ATTORNEY/AGENT INFORMATION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      448 YIAQMCLNDEGGPSS-LSSHRWSTFLKVELECDIDGRSYRQIIHSKAIKTDNDTILYVFF 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             507 DS--PYSKSALCTYSMNAIKHSFSTSKLGGYTKQLPSP--------APGICL 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 ASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICG 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 YFKEQFLDGDGWTSRWIESKHKSDFCKFVLS---SGKFYGDEEKDKGLQTSQDARFYALS 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 660;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 9.2%; Score 89; DB 4; Length 660
Best Local Similarity 20.6%; Pred. No. 0.14;
Matches 41; Conservative 25; Mismatches 91; Indels
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Patent No. 5928900
GERERAL INFORMATION:
APPLICANT: Masure, H Robert
APPLICANT: Pearce, Barbara J
APPLICANT: Tuomanen, Elaine
TITLE OF INVENTION: BACTERIAL EXPORTED PROTEINS AND
TITLE OF INVENTION: ACELLULAR VACCINES BASED THEREON
NUMBER OF SEQUENCES: 58
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JULIANTE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/245,511
FILING DATE: 18-MAY-1994
NROR ASSIFICATION: 424
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APPLICATION NUMBER: US 08/116,541
                    APPLICATION NUMBER: US/09/459,066
                               FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/958,598
FILING DATE:
TITING DATE:
                                                                                                                                                                NAME: HGDLY, JGDIS C
REGISTRATION NUMBER: 34,347
REFRENCE/DOCKET NUMBER: 2631
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206)470-4189
TELEPAX: (206)470-4189
INFORMATION FOR SEC ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 660 maino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Klauber & Jackson
STREET: 411 Hackensack Avenue
CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-
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CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                  umino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
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sequence error; the correct sequence shown below is obtain from GENBANK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164 WNSKLTYSIFWPLNEEFETSKGSDFAKPTDPTSLLYNGPFLLKGLTAKSSVEF----VKN 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220 EQYWDKENVHLDTINLAYYDGSDQESLERNFTSGAYSYARLYPTSSNYSKVAEEYKDNIY 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            280 YTQSGSGIAGLGVNIDRQSYNYTSKTTDSEKVATKKALLNKDFRQALNFALDRSAYSAQI 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16 WTSR-----W----IESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASF 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 8.0%; Score 77.5; DB 2; Length 642; Best Local Similarity 21.2%; Pred. No. 2.6; Matches 42; Conservative 20; Mismatches 81; Indels 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: NOTE: the reference contains a OTHER INFORMATION: sequence error; the correct sequence PUBLICATION INFORMATION: from GENBANK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 48, Application US/0860093A
Patent No. 598129
GENERAL INFORMATION:
APPLICANT: Masure, H Robert
APPLICANT: Pearce, Barbara J
APPLICANT: Pearce, Barbara J
TITLE OF INVENTION: BACTERIAL EXPORTED PROTEINS AND
TITLE OF INVENTION: ACELLULAR VACCINES BASED THEREON
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 600-1-069 CIP
TELECOMUNICATION INFORMATION:
TELEPHONE: 201 487-5800
TELEPRAX: 201 343-1684
TELEFAX: 201 343-1684
TELEX: 133521
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 642 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGINAL SOURCE:
ORGANISM: Streptococcus pneumoniae
IMMEDIATE SOURCE:
CLONE: amia
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS: Alloing, et al.
JOURNAL: Mol. Microbiol.
                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: unknown
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
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APPLICANT: Reed, Steven G.
APPLICANT: Dillon, Davin C.
APPLICANT: Twardzik, Daniel R.
APPLICANT: Witcham, Jennifer L.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR IMMUNOTHERAPY
TITLE OF INVENTION: AND IMMUNODIAGNOSIS OF PROSTATE CANCER
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESSS:
ADDRESSSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.9%; Score 77; DB 3; Length 15; 100.0%; Pred. No. 0.013; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: ARLETH, ANTHONY J.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: ELSHOURBAGY, NABIL A.
APPLICANT: LI, XIAOTONG
TITLE OF INVENTION: HUMAN CARDIAC/BRAIN TOLLOID-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARES PATENTIN Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/946,026 FILING DATE: 07-0CT-1997 CLASSIFICATION: 424 ATTORNEY/AGENT INFORMATION:
NAME: MAKL, DAVId J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 210121.424C1
TELECOMMUNICATION INFORMATION:
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Patent No. 6008017
                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIF: 981.04-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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STREET: P.O. BOX 980
CITY: VALLEY FORGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 53:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMpatible
OPERATING SYSTEM: DOS
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Best Local Similarity 100.
Matches 14; Conservative
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                                                                                                                                                                                                                                                 CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
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  GENERAL INFORMATION:
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STATE: PA
COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                112 NIMFGPDICGPGTKKVHVIFNYKG------KNVLINKDIR-------145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16 WTSR-----W----IESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASF 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 8.0%; Score 77.5; DB 2; Length 642; Best Local Similarity 21.2%; Pred. No. 2.6; Matches 42; Conservative 20; Mismatches 81; Indels 55;
                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OFBRAING SYSTEM: PC-DOS/MS-DOS
SOFTWARE PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,993A
FILING DATE: I-MAR-1996
CLASSIFICATION: 435
PRIOR APPLICATION WHERE: US 08/245,511
FILING DATE: 18-MAY-1994
CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION UNBER: US 08/116,541
FILING DATE: 01-SEP-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                     NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 600-1-069 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201 487-5800
TELEFAX: 201 343-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Streptococcus pneumoniae
IMMEDIATE SOURCE:
CLONE: amiA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
US-08-946-026-53
Sequence 53, Application US/08946026;
Patent No. 6034118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  146 -CKDDEFTHLYTLIVRPD 162
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBLICATION INFORMATION:
AUTHORS: Alloing, et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL: Mol. Microbiol
COMPUTER READABLE FORM:
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US-08-600-993A-48
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Gaps

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68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
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                                                                                                                                                         Query Match 7.7%; Score 75; DB 2; Length 1013; Best Local Similarity 31.4%; Pred. No. 9.7; Matches 33; Conservative 15; Mismatches 39; Indels 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
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                                                                                                                                                                                                                                                                                                                                                          126 KVHVIFNYKGKNVLI -- NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
APPLICANT: Takahara, Kazuhiko
APPLICANT: Hoffman, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/021,287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 7.7%; Score 75; DB Best Local Similarity 31.4%; Pred. No. 9.7; Matches 33; Conservative 15; Mismatches
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Quarles & Brady
STREET: 1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/866,650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5, Application US/09021287
Patent No. 5981717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Berson, Bennett J
REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 96.
TELECOMMUNICATION INFORMATION:
TELECHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
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LENGTH: 1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION
  LENGTH: 1013 amino acids TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO:
                                                               ; MOLECULE TYPE: protein US-08-866-650-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , MOLECULE TYPE: protein US-09-021-287-5
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53703
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                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-09-021-287-5
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STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 7.7%; Score 75; DB 3; Length 591; Best Local Similarity 31.4%; Pred. No. 4.5; Mutches 33; Conservative 15; Mismatches 39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/08866650
Patent No. 593931
GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
APPLICANT: Takahara, Kazuhiko
APPLICANT: Takahara, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.30
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                                                                                                                                                                                                                       ATG-50038
                                           FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 60/034,471
FILING DATE: 02-13A-1997
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: ATG-50(
TELECOMMUNICATION INFORMATION:
TELEFANE: 610-407-0701
TELEFANE: 610-407-0701
TELEFANE: 846169
INFORMATION FOR SEG ID NO: 4:
SECULE CHARACTERISTICS:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/866,650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Quarles & Brady
South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: BGESON, BGENEATION:
REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 960;
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5060
INFORMATION FOR SEQ. ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 591 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 1 Sou CITY: Madison
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                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
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US-08-866-650-5
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RESULT 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --CGSGPPE 972
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                         973 EIYSI----GDSVLIHFHTDDTINKKGFHIRYKSIRYPDTHTKK 1013
126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: ARLETH, ANTHONY J.
APPLICANT: WILETTE, ROBERT N.
APPLICANT: ELSHOURBACY, NABIL A.
APPLICANT: LI, XIAOTONG
TITLE OF INVENTION: HUMAN CARDIAC/BRAIN TOLLOID-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,408
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATG-50038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/034,471
FILING DATE: 02-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAULF
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: ATG-5003
TELEPHONE: 610-407-070
TELEPHONE: 610-407-070
TELEFA: 846169
INFORMATION FOR SEQ ID NO: 2:
LENGTH: 1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-09-240-473-5

Sequence 5, Application US/09240473

Patent No. 6297011

GENERAL INFORMATION:

APPLICANT: Greenspan, Daniel S
                                                                                                                                        Sequence 2, Application US/08991408 Patent No. 6008017
                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: RATNER & PRESTIA
STREET: P.O. BOX 980
CITY: VALLEY FORGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 19482
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein
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Sequence 56, Application US/08231193A
Patent No. 5849895
GENERAL INFORMATION:
APPLICANT: Daggett, Lorrie P.
APPLICANT: Ellis, Steven B.
APPLICANT: Liaw, Chen W.
APPLICANT: Lu, Chin-Chun
TITLE OF INVENTION: HUMAN N-METHYL-D-ASPARTATE RECEPTOR
TITLE OF INVENTION: SUBUNITS, NUCLEIC ACIDS ENCODING SAME AND USES THEREFOR NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4; Length 1013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 973 EIYSI----GDSVLIHFHTDDTINKKGFHIRYKSIRYPDTTHTKK 1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                     APPLICANT: Hoffman, Guy G
TTLE OF INVENTION: Mammallan Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
PLICATION NUMBER: US/09/240,473 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Brown, Martin, Haller & McClain
STREET: 1660 Union Street
CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.7%; Score 75; DB 4
31.4%; Pred. No. 9.7;
Live 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960296.93839
                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                            ADDRESSEE: Quarles & Brady
STREET: 1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Berson, Bennett J
REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 9601
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
TELERAX: 608-251-9166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IBM PC compatible
Takahara, Kazuhiko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best_Local Similarity 31.4%
Matches 33; Conservative
                                                                                                                                                                                                                       ZIP: 53703
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , MOLECULE TYPE: protein US-09-240-473-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
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OPERATING SYSTEM:
SOFTWARE: Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U.S.A. ZIP: 92101-2926
                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                       CITY: Madison
STATE: WI
                                                                                                                                                                                                      ns
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                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/231,193A
FILING DATE: 20-APR-1994
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/052,459
FILING DATE: 20-APR-1993
CLASSIFICATION NUMBER: US 08/052,459
FILING DATE: 20-APR-1993
CLASSIFICATION: 536
ATTORNEY FACENT INFORMATION:
NAME: SAIdman, Stephanie
REGISTRATION NUMBER: 6362-9383
FELECOMMUNICATION INFORMATION:
TELEPHONE: 619-238-0969
INFORMATION POR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 1484 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-231-193A-56
```

Query Match 7.5%; Score 72.5; DB 2; Length 1484; Best Local Similarity 27.7%; Pred. No. 32; Matches 23; Conservative 13; Mismatches 28; Indels 19; Gaps

100 L------DQTDMHGDSEY 111

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: | | : | | | | 1382 VTQNPFIPTFGDDQCLLHGSKSY 1404

Search completed: January 9, 2002, 14:59:42 Job time: 69 sec

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4.5
Compugen Ltd.
GenCore version
Copyright (c) 1993 - 2000
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sw model OM protein - protein search, using 2002, 14:58:53 6 January Run on:

Search time 43.73 Seconds (without alignments) 313.547 Million cell updates/sec

US-09-828-000-3

971 1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

219241 seqs, 76174552 residues Searched:

Total number of hits satisfying chosen parameters:

219241

seq length: 0 seq length: 2000000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR_68:* 1: pirl:* 2: pir2:* 3: pir3:* 4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	ıŏ	calreticulin precu		in,	14	calreticulin precu			calreticulin precu		reticuli	41K larval antigen	calreticulin - bar	calreticulin - bar	calreticulin precu	calreticulin - bee	calreticulin - cas		calreticulin call			hypothetical prote		probable calreticu	calnexin precursor	calnexin precursor	calnexin - human	calnexin precursor	calnexin precursor	
SUMMARIES	ID		Ë		S4																										
	Length DB				400 2																										
dР	Query Match	100.0	96.1	95.9	95.8	95.8	86.0	82.8	82.1	82.0	72.0	63.8	55.9	55.5	55.5	55.2	54.7	54.3	53.8	53.8	53.2	52.7	52.5	51.1	35.7	30.2	29.9	29.9	29.9	29.7	
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	Result No.		73	m	4	S	9	7	œ	σ	10	11	12	13	14	15	,16	17	18	19	20	21	22	23	24	25	56	27	28	29	

calmegin precursor calnexin precursor	calcium-binding pr calnexin-t - mouse	hypothetical protection of the calnexin-like prot	calnexin - soybean probable calnexin	calnexin homolog - calreticulin, uter	calreticulin, slow calreticulin, brai	calnexin homolog Y	-
A53418 S71342	S56142 A54086 A46637	S40938 JN0597	T06415 T10892	T49873 E33208	C33208 D33208	S29347	703251
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611	560 611 582	619 530	546 540	532 29	29 29	502	428
27.8	26.1	25.1	23.9	20.6 16.2	14.9 14.8	13.7	12.8
270	253.5 252 248	244	232 215.5	200.5 157	145 144	133.5	124.5
30	w w w	302	37	39	41	43	4.4

ALIGNMENTS

		nding pr						y with t					
	calreticulin precursor – human	N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding pr	C; Species: Homo sapiens (man)	C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000	C; Accession: A42330; A37047; A46452; A28812; PH1525; A40346; S11475; T45075	R;McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sonthelmer, R.D.; Capra, J.D.	J. Biol. Chem. 267, 2557-2562, 1992	A; Title: The 5'-flanking region of the human calreticulin gene shares homology with t	A; Reference number: A42330; MUID:92129342	n: A42330	type: DNA	A;Residues: 1-417 <mc2></mc2>	A STATE OF THE PARTY OF THE PAR
A37047	calreticulir	N; Alternate	C; Species: 1	C; Date: 10-5	C; Accession	R; McCauliffe	J. Biol. Che	A; Title: The	A; Reference	A; Accession: A42330	A; Molecule type: DNA	A; Residues:	

A; Wockelludes: 1-41/ Caux, F.A.; Lieu, T.S.; Sanz, I.; Hanke, J.; NewAirk, M.M.; Bachin, J. Clin, Invest. 85, 1379-1391, 1990
A; Witte: Wockeular Clouding, expression, and chromosome 19 localization of a human Ro/ A; Reference number: A37047; MUID: 90237213
A; Reference number: A37047; MUID: 90237213
A; Reference number: A37047; MUID: 90237213
A; Motecule type: MRNA
A; Residues: 1-41, Caux, F.A.; Mellof, D.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B. A; Reference number: A40452; MID: 90237213
A; Note: the authors translated the codon GTA for residue 349 as Tyr
B; Rokeach, L.A.; Heaslby, J.A.; Mellof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B. A; Title: Characterization of the autoantigen calreticulin.
A; Reference number: A46452; MUID: 92013129
A; Rocession: A26452; MUID: 92013129
A; Reference number: A26912; MUID: 92013648
A; Rocession: A26452; MUID: 92013648
A; Rocession: A26452; MUID: 92015648
A; Rocession: A26452; MUID: 9201564
A; Rocession: A26452; MUID: 92015648
A; Rocession: A2645448
A; Rocession: A264544
A; Rocession: A264544
A; Rocession: A264544
A; Rocess

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R.Murthy, K.K.; Banville, D.; Srikant, C.B.; Carrier, F.; Holmes, C.; Bell, A.; Patel Nucleic Acids Res. 18, 4933, 1990
A.Title: Structural homology between the rat calreticulin gene product and the Onchoc A, Reference number: S11205; MUD: 90370496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein
A; Residues: 18-36 <VAN>
R; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M
Blochem. J. 271, 473-480, 1990
A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor
A; Reference number: S13045; MUID:91054414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Experimental source: testis, strain Sprague-Dawley R; Soennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies submitted to the EMBL Data Library, May 1994
A; Description: Retention and retrieval: both mechanisms cooperate to maintain calreti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 'R', 270-358,' AAG' <LON>
A; Cross-references: EMBL:X13702; NIDS:956055; PIDN:CAA31987.1; PID:9930260
A; Cross-references: EMBL:X13702; NIDS:956055; PIDN:CAA31987.1; PID:9930260
A; Note: the authors designated the protein as D-beta-hydroxyburyrate dehydrogenase
R; Yokoi, T.; Nagayama, S.; Kajiwara, R.; Kawaguchi, Y.; Horiuchi, R.; Kamataki, T.
Biochim. Biophys. Acta 1158, 339-344, 1993
A; Title: Identification of protein disulfide isomerase and calreticulin as autoimmune
A; Reference number: S39371; MUID:94072621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Meadudes: 18-23, %7, 25-32 < YOK>
A; Readudes: 18-23, %7, 25-32 < YOK>
B; Van, P. M.; Peter, F.; Soeling, H.D.
J. Biol. Chem. 264, 17494-17501, 1989
A; Title: Four intractaternal calcum-binding glycoproteins from rat liver microsomes it; ve calclum sequestering rat liver vesicles.
A; Reference number: A34473; MUID:90008920
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                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-416 <mur>
A; Cross-references: EMBL: X3363; NID:955854; PIDN:CAA37446.1; PID:955855
A; Cross-references: EMBL: X; Baba, T.; Okinaga, S.; Arai, K.
Biochem: Blophys: Res. Commun. 186, 668-673, 1992
A; Title: Calreticulin is present in the acrosome of spermatids of rat testis.
A; Reference number: PC1109; MUID:92360010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-416 <SOE>
A;Cross-references: EMBL:X79327; NID:9488840; PIDN:CAA55890.1; PID:9488841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18 DPAIYFKEQFLDGDAWTNRWVESKHKSDFGKFVLSSGKFYGDQEKDKGLQTSQDARFYAL 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;344/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 416;
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Pred. No. 8.8e-77;
5; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;1-17/Domain: signal sequence *status predicted <SIG> *18-416/Product: calreticulin *status experimental <MAT> F;204-212/Region: nuclear location signal F;413-416/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Lone, Y.C.; Bailly, A.; Latruffe, N.
submitted to the EMBL Data Library, December 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Superfamily: calreticulin
C; Keywords: calcium binding; glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96.1%;
94.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Reference number: $45036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: S04867
A; Accession: S04867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 18-32 <NAK2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 18-29 <TRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: S45036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: A34473
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 170;
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Best Local $
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                                                                                                                                                                                                                                                                                                                                                                               A; Molecula type: protein
A; Molecula type: protein
B; Molecula type: JekkA.
A; Residues: 18-32 KKRA.
R; Limenlin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
Submitted to the EMBL Data Library, November 1996
A; Description: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
A; Reference number: 22906
A; Accession: T45075
A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                        A;Title: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-purif
A;Reference number: S11475; WUID:90380058
A;Accession: S11475
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C; Date: 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change 20-Jun-2000
C; Date: 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change 20-Jun-2000
C; Accession: JH0819; Asyl76; S11205; PC1109; S45036; S04867; S39372; A34473; S13045
C; Accession: JH0819; Asyl76; Milanama (Y.; Yamanobe, T.; Arai, K.; Okinaga, S. Exp. Coll Res. 205, 101-110, 1993
Exp. Coll Res. 205, 101-110, 1993
A; Title: An endoplasmic reticulum protein, calreticulin, is transported into the acrosom A; Accession: JH0819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A/Molecule type: DNA
A/Residues: 1.417 < LAM>
A/Residues: E. 1.417 < LAM>
A/Cres-references: EMBL:AD000092; PIDN:AAB51176.1
A/Experimental source: cell line 5HLZ-B; fibroblast
C/Comment: Autoantibodies specific for this protein are found in Sjogren's syndrome and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEXNIMFGPDIC 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Wolocule type: mRNA
RNB41dues: 1-416 CNAK>
A;Cross references: GB:D78308; NID:g1089798; PIDN:BAA11345.1; PID:g1845572
A;Accession: A49176
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A/Residues: 1-416 CNA2>.
A/Cross-references: GB:D78308; NID:g1089798; PIDN:BAA11345.1; PID:g1845572
A/Experimental source: Sprague-Dawley, spermatogenic cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: GDB:CALR
A;Crosa-references: GDB:125179; OMIM:109091
A;Map position: 19p13.3-19p13.2
A;Introne: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
                                                                                                                     A;Wolecule type: protein
A;Residues: 18-34, 7R' <ROJ>
K:Krause, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
Biochem. J. 270, 545-548, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;1-17/Domain: signal sequence #status predicted <SIG>F;18-417/Product: calreticulin #status predicted <MAT>F;414-417/Region: endoplasmic reticulum retention signal
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                                                        Reference number: A40346; MUID:92002034
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                                                                                          Accession: A40346
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Matches 180;
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A Accession: JC1444
A; Molecule type: mRNA
Residues: 1-416 <AMZ>
A; Cross-references: GB: M92988; NID:g193084; PIDN: AAA37569.1; PID:g193085
A; Accession: PC1233
A; Molecule type: protein
A; Molecule type: protein
A; Residues: 18-41 <AMAZ>
R; White, T. K.; Zhu, Q.; Tanzer, M.L.
A; Biol. Chem. 270, 15926-15929, 1995
A; Title: Cell surface calreticulin is a putative mannoside lectin which triggers mous A; Reference number: A57498; MUID:95332280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Title: Determination of the sequence of an expressible cDNA clone encoding ERp60/ca A; Reference number: JC1444; MUID:93013037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            calreticulin (CRP55, calregulin, HACBP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Mus musculus (house mouse)
C;Decies: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: S06763; JC1444; PC1233; A57498
R;Smith, Mu.1; Roch, G.L.E.
BENBO J. 8, 3581-3586, 1986
A;Title: Multiple zones in the sequence of calreticulin (CRP55, calregulin, A;Reference number: S06763; MUID:90059955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 SARFEPPSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPAGLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPNNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                               experimental
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Pred. No. 1.6e-76;
5; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                           Length 400
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
A; Accession: S36801
A; Status: nucleic acid sequence not shown
A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 45-63, 'E', 65-83 <LIU>
A; Experimental source: brain, clone 8.1
C; Superfamily: calreticulin
C; Superfamily: calreticulin
F; 397-400/Region: endoplasmic reticulum retention signal
F; 120-146/Disulfide bonds: #status experimental
F; 162/Binding site: carbohydrate (Asn) (covalent) #status
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                                                                                                                                                                                                                                                                                                                                                                     Query Match 95.8%; Score 930; DB 2; L
Best Local Similarity 95.0%; Pred. No. 1.6e-76;
Matches 171; Conservative 3; Mismatches 6;
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A;Residues: 74-80;142-151;186-193
C;Superfamily: calreticulin
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Best Local Similarity 94.4%;
Matches 170; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin precursor - mouse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-416 <SMI>
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S43376
calreticulin, brain isoform 1 - bovine
C; Species: Bos prinigentus taurus (cattle)
C; Date: 20-Oct-1994 #sequence_revision 23-Mar-1995 #text_change 07-May-1999
C; Accession: S43376; S36801
R; Matsuoka, K.; Setta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T.
Biochem. J. 298, 435-442, 1994
A; Title: Covalent structure of bovine brain calreticulin.
A; Reference number: S43376; MUID:94183174
A; Reference number: S43376; MUID:94183174
A; Residues: 1-400 cMAT>
A; Residues: 1-400 cMAT>
A; Residues: Donson, R.J.
B; Liu, N.; Fine, R.E.; Johnson, R.J.
Biochim. Biophys. Acta 1202, 70-76, 1993
A; Title: Comparison of cDNAs from bovine brain coding for two isoforms of calreticulin.
A; Reference number: S36799; MUID:93385184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R;Treves, S.; de Mattel, M.; Lanfredl, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; Meld
Blochem. J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-storage
A;Reference number: S13045; MUID:91054414
                                                                                                                                                                                                                                                                                                                                                                                              C; Species: Oryctolagus cuniculus (domestic_rabbit)
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C; Accession: A34154; S13047
R;Filegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.
J. Blol. Chem. 264, 21522-21528, 1989
A;Title: Molecular cloning of the high affinity calcium-binding protein (calreticulin) A;Reference number: A34154; MUID:90094320
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                               121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                       138 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 197
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Pred. No. 1.3e-76;
1; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Keywords: skeletal muscle
F;1-17/Domain: signal sequence #status predicted <SIG>
F;415-418/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                      RESULT 3
A34154
calreticulin precursor, skeletal muscle - rabbit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 95.6%;
Matches 172; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein A; Residues: 19-32 <TRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-418 <FLI>
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A; Reference number: A94207; MUID: 88320566
A; Accession: B31409
A; Accession: B31409
A; Molecule type: protein
A; Mesidues: 'X', 17-28, 'X', 30-31 <KE2>
A; Sesidues: 'X', 17-28, 'X', 30-31 <KE2>
B; Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, B.; Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, B.; Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, A; Tille: Development of a database of amino acid sequences for proteins identified an A; Reference number: A60977; MUID: 89276264
A; Molecule type: protein
A; Residues: 'X', 17-28, 'X', 30-31 <SWE>
C; Superfamily: calreticulin
C; Keywords: calcum binding: endoplasmic reticulum
C; Keywords: calcum binding: endoplasmic reticulum retention signal
F;16-405/Region: endoplasmic reticulum retention signal
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C.Species: Xenopus laevis (African clawed frog)
C.Species: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C.Accession: S29130; T01068
R.Treves, S.; Zorzato, F.; Pozzan, T.
Bliochem. J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous syst A;Reference number: S29129; MUID:93074997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72 QTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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A;Experimental source: CNS
C;Superfamily: calreticulin
C;Keywords: glycoprotein
E;381-384/Region: endoplasmic reticulum retention signal
F;316/Binding site: carbohydrate (Asn) (covalent) #status predicted
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85.2%; Pred. No. 1.6e-64;
ive 12; Mismatches 13; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.8%; Score 804; DB 1; 79.4%; Pred. No. 3.9e-65; tive 18; Mismatches 17
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A; Molecule type: mRNA
A; Residues: 1-384 cTRE>
A; Cross-references: EMBL:X67598
A; Accession: T01068
A; Status: translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-339, XTGR < TRW>
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Best Local Similarity 85.28
Matches 144; Conservative
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Best Local Similarity
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JH0795
calretticulin precursor - California sea hare
calretticulin precursor - California sea hare
N;Alternate names: protein 407
C;Species: Aplysia californica (California sea hare)
C;Accession: JH0795; B31409; F60977
R;Kennedy, TE.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
A;Title: Long-term sensitization training in aplysia leads to an increase in calreticuli A;Reference number: JH0795; MUID:93098937
A;Accession: JH0795.
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A; Rosiduae: 1.405 «KEN>
A; Rosiduae: 1.405 «KEN>
A; Cross-references: 6B:551239; NID:9262053; PIDN:AAB24569.1; PID:9262054
A; Experimental source: abdominal ganglion and antral nervous system
R; Kennedy, T.E.; Gawinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Rpco. Natl. Acad. Scl. U.S.A. 85, 7008-7012, 1988
A; Title: Sequencing of proteins from two-dimensional gels by using in situ digestion and tion in Aplysia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
s29129
calrettuin precursor (clone 3) - African clawed frog (fragment)
C; Species: Xenopus leevis (African clawed frog)
C; Species: Xenopus leevis (African clawed frog)
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C; Accession: 539129
R; Traves, S:; Zoraatc, F:; Pozzan, T.
Biochem. J. 287, 579-581, 1992
R; Traves, S:; Zoraatc, F:; Pozzan, T.
Biochem. J. 287, 579-581, 1992
A; Title: Identification of calreticulin isoforms in the central nervous system.
A; Reference number: S29129; MUID:93074997
A; Rocession: S29129
A; Molecula types: mRNA
A; Reveluces: I-411 <-TRE>
A; Coss = references: EMBL: X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C; Superfamily: calreticulin
C; Superfamily: calreticulin #status predicted <-SIG>F; 11-12/Domain: signal sequence (fragment) #status predicted
F; 13-411/Product: calreticulin #status predicted <-MAT>F; 339/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                  18 DPAIYFKEQFLDGDAWINRWVESKHKSDFGKFVLSSGKFYGDLEKDKGLQTSQDARFYAL 77
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                                       1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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R;Smith, M.J.
DNA Seq. 2, 235-240, 1992
A;Title: A C. elegans gene encodes a protein homologous to mammalian calreticulin. A;Reference number: $25851; MUID:92329978
A;Accession: $25851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:AF125963; PIDN:AAD14746.1; GSPDB:GN00023; CESP:Y38A10A.5
A;Experimental source: strain Bristol N2; clone Y38A10A
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T33996
                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 SFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FDKDFSNKGKTLVIQYTVKHEQGIDCGGGYVKVMRADADLGDFHGETPYNVMFGPDICGP 135
                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                    4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                 Length 406;
                                                                                                                                                                                                                                                            30; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:X59589; NID:96693; PIDN:CAA42159.1;
R;Bauer, C.; Courtney, L.; LaPlant, Y.
submitted to the EMBL Data Library, February 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Description: The sequence of C. elegans cosmid Y38AlOA. A; Reference number: 221453
A; Accession: T33996
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-395 < BAU>
A;Introns: 65/1; 222/3
C;Superfamily: calreticulin
C;Keywords: calcium binding; endoplasmic reticulum
F;1-17/Domain: signal sequence #status predicted <SIG>
F;403-406/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,Gene: CESP:Y38A10A.5
A;Map position: 5
A;Introns: 107/2; 315/3
C;Superfamily: calreticulin
F;1-15/Domain: signal sequence #status predicted <SIG>F;392-395/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63.8%; Score 619.5; DB 2; 63.5%; Pred. No. 1.8e-48; ive 26; Mismatches 36;
                                                                                                                                                                                                 Score 699; DB 2;
Pred. No. 1.2e-55;
                                                                                                                                                                                                                                                            14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               calreticulin precursor - Caenorhabditis elegans
                                                                                                                                                                                                 72.0%; Score 699; 74.2%; Pred. No. 1.
                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                 Similarity
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A; Residues: 1-395 <SMI>
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                                                                                                                                                                                                                                 Best Local Simi
Matches 132;
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Best Local S:
Matches 113
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Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
R;McCaullife, D.P.: Zappi, E.: Lieu, T.S.; Michalak, M.; Sonthelmer, R.D.; Capra, J.D.
J. Clin. Invest. 86, 332-335, 1990
A;Title: A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homony. Reference number: A37158; MUID:90307981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Seq. 3, 247-250, 1992
A;Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin
A;Reference number: A56637; WUID:93208374
A;Accession: A56637
                                                                                                                                                                                                                                                                                                                                                                           Rana
                                                                                                                                                                                                                                                                                                                                                                      the frog,
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C;Superfamily: calreticulin
C;Keywords: calceticulin
C;Keywords: calcium binding; endoplasmic reticulum
F;1-18/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     calreticulin homolog precursor - fruit fly (Drosophila melanogaster)
N;Alternate names: RO/SS-A autoantigen/calreticulin homolog
C;Species: Drosophila melanogaster
C;Date: 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999
C;Accession: A56637; A37158
                                                                                                                                                                                                                         C;Species: Rana rugosa (Korean frog)
C;Date: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19 KPAVYFQEEFGDGDAWKERWIQSKHKSDYGQFKLSAGKFYGDEEKDKGLQTSQDAKFYAH 78
                                                                                                                                                                                                                                                                                                                                                                      of
                                                                                                                                                                                                                                                                                                                                                                      the liver
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132 NYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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WCC
                                                                                                                                                                                                                                                                                                                                                                      expression in
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                                                                                                                                                                                                                                                                           C; Accession: S71343
R; Yamanoto, S.; Nakamura, M.
FFIS Lett. 387, 27-32, 1996
A; Reference number: 1ts molecular cloning and A; Reference number: S71342; MUID:96234004
A; Accession: S71343
A; Status: nucleic acid sequence not shown A; Molecule type: mRNA
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A;Cross-references: FlyBase:FBgn0005585
                                                                                                                                                                                              calreticulin precursor - Korean frog
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Matches 145; Conserv
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A; Residues: 1-406 <SMI>
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61 79

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C; Genetics:

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calreticulin - barley (fragment)
C;Species: Hordeum vulgare (barley)
C;Date: 23-Apr-1999 #text_change 11-May-2000
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 11-May-2000
C;Accession: T05705
R;Chen, F.; Hayes, P.M.; Mulroony, D.; Pan, A.
Plant Cell 6, 835-843, 1994
A;Title: Identification and characterization of cDNA clones encoding plant calreticul A;Reference number: 215422; MUID:94339696
A;Accession: T05705
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R;Dresselhaus, T.; Hagel, C.; Loerz, H.; Kranz, B.
submitted to the EMBL Data Library, July 1995
A;Description: Isolation of a CDNA encoding Calreticulin from in vitro zygotes of mai A;Reference number: S58170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RiNapier, R.M.; Trueman, S.; Henderson, J.; Boyce, J.M.; Hawes, C.R.; Fricker, M.D.; submitted to the EMBL Data Library, November 1994
A.; Description: Purificaton and sequencing of calreticulin from maize and evidence for A.; Reference number: 849818
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C;Date: 13-Jan_1996 #sequence_revision 01-Mar-1996 #text_change 13-Aug-1999
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A;Modiccule type: DDA
A;Residues: 1-411 <NAP>
A;Residues: 1-421 <NAP>
A;Cross-references: EMBL:246772; NID:q577611; PIDN:CAA86728.1; PID:q577612
                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: manA
A;Residues: 1-415 <CHE>
A;Cross-references: EMBL:L27349; NID:g439587; PIDN:AAA32949.1; PID:g439588
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A;Molecule type: mRNA
A;Residues: 1-421 <DRE>
A;Residues: 1-421 <DRE>
A;Cross-references: EMBL:X89813; NID:g927571; PIDN:CAA61939.1; PID:g927572
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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C; Keywords: calculum binding
F;1-25/Domain: signal sequence #status predicted <SIG>
F;418-421/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.5%; Score 539; DB 2; 56.4%; Pred. No. 3.5e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: cv. Morex, ovary C; Genetics:
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C, Superfamily: calreticulin
C, Keywords: calcium binding
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Best Local Similarity
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RESULT
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Plant Cell 6, 835-843, 1994
A/Title: Identification and characterization of cDNA clones encoding plant calreticulin A/Accession: T05703
A/Accession: T05703
A/Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                     C; Species: Onchocerce volvulus
C; Species: Onchocerce volvulus
C; Date: 21-May-1990 #sequence_revision 21-May-1990 #text_change 12-Apr-1995
C; Accession: A2507; A26813
R; Unnasch, T.R.; Gallin, M.Y.; Soboslay, P.T.; Erttmann, K.D.; Greene, B.M.
J. Gillin. Invest: 82, 262-269; 1988
A; Title: Isolation and characterization of expression cDNA clones encoding antigens (A) Reference number: A92769; MUTD: 88273584
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C;Species: Hordeum vulgare (barley)
C;Dute: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 11-May-2000
C;Accession: T05703
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39 FYGDEEKDKGLQTSQDARFYALSASFE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFP 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 336;
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                                                           41K larval antigen - nematode (Onchocerca volvulus) (fragment)
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68.5%; Pred. No. 1.3e-41;
ilve 22; Mismatches 22
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C, Superfamily: calreticulin
C, Keywords: calcium binding
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Best Local Similarity
Matches 101; Conserv
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A; Molecule type: mRNA
A; Residues: 1-336 <UNN>
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A; Residues: 1-412 <CHE>
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        Query Match
        55.2%;
        Score 536;
        DB 2;
        Length 421;

        Bast Local Similarity 56.4%;
        Pred. No. 6.7e-41;
        Adaches 101;
        Conservative 31;
        Minatches 41;
        Indels 6;
        Gaps 3;

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Search completed: January 9, 2002, 15:02:02 Job time: 189 sec

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 9, 2002, 15:01:18; Search time 25.18 Seconds (without alignments) 262.100 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-828-000-3 971 1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 segs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	P27797 homo sapien P18418 rattus norv P1523 oryctolagus P52193 bos taurus P14211 mus musculu P29413 drosophila P11012 onchocerca P27798 caenorhabdi Q23858 dictyosteli Q92793 euglena gra Q81919 beta vulgar P93508 ricinus com Q95198 oryza sariev Q40401 nicotiana p Q8198 erabidopsis Q940401 nicotiana p Q840401 nicotiana p Q840401 nicotiana p Q840401 nicotiana p Q8404151 arabidopsis Q95423 chanus arror Q84041 sus scrofa P2556 mus musculu P3556 rattus norv P24643 canis famil P27824 homo sapien P3561 canis famil P27844 homo sapien P3462 caenorhabidi P29402 arabidopsis
SUMMARIES ID	CRTC. HUMAN CRTC. RAIT CRTL. BABIT CRTL. BOVIN CRTC. DOUSE CRTC. DOUSE CRTC. LOROME RALI_ONCVO CRTC. LOLEDI CRTC. LOLEDI CRTC. LOLEDI CRTC. LOLEDI CRTC. LOLEDI CRTC. LOROME CRTC. RETVO CRTC. RETVO CRTC. RETVO CRTC. RATH CRTC. REATH CRTC. SCHMA CRTC. SCHMA CRTC. SCHMA CRTC. RAIT CRTC. R
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Score	6 6 9 9 3 3 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3
Result No.	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

Q39817 glycine max Q39994 helianthus Q8799 helian thus Q8799 barabidopsis P27825 saccharomyc P28490 canis famil Q9mupO mesostigma P25201 acinetobact P23224 listeria mo Q01457 hateoccus P45354 haemophilus	P18791 streptococc
CALX_SOYBN CALX_HELTU CALX_PEATH CAX_ZARATH CALX_YEAST CACC_CANFA EFTU_MESVI MTAL_ACICA MTAL_ACICA ABIC_LIACMA HXAZ_HAEIN	AMIA_STRPN
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ALIGNMENTS

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STRAIN-SPRAGUE-DAWLEY;
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                                                                                                                                                                                                       "Microsequences of 145 proteins recorded in the two-dimensional gel
protein database of normal human epidermal keratinocytes.";
Electrophoresis 13:960-969(1992).
                                                   Hochstrassor D.F., Frutiger S., Paquet N., Bairoch A., Ravier F., Pasquall C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J., "Human liver protein map: a reference database established by microsequencing and gel. comparison.";
                                                                                                                            TISSUE-Keratinocytes;
MEDINE-93150143; PubMed-1286667;
Kamussen H.H., van Damme J., Puype M., Gesser B., Celis J.E.,
Vandekerckhove J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Probon, PD001866, Calreticulin; 1.
PROSTTE; PS00014; ER_TARGET; 1.
PROSTTE; PS00803; CALRETICULIN_1; 1.
PROSTTE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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4 X APPROXIMATE REPEATS.
1-1.
1-2.
                                                                                                                   PARTIAL SEQUENCE OF 25-34; 56-62; 208-221 AND 273-278
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P-DOMAIN.
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InterPro; IPR000886; ER_target.
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EMBL; M32294; AAA36582.1; -.
EMBL; AD000092; AAB51176.1; -.
PIR; A37047; A37047.
PIR; A44330; A44330.
PIR; A46452; A46452.
SWISS-2DPAGE; P27737; HUMAN.
HSC-2DPAGE; P27797; HUMAN.
                                    TISSUE-Liver;
MEDLINE-93162045; Pubmed-1286669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN.
        Biochem. J. 270:545-548(1990)
                          SEQUENCE OF 18-28.
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SEQUENCE OF 18-26.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "An endoplasmic reticulum protein, calreticulin, is transported into the acrosome of rat sperm.";
Exp. Cell Res. 205:101-110(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
NCBL_TaxID=10116;
                                                                                                                                                                                                                                                                                                                              Gaps
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Okinaga S., Kobayashi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRPS5) (CALREGULIN) (HACBP) (ERP60) (CALBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Holmes C., Patel Y.C.;
Structural homology between the rat calreticulin gene product and
the Corchocerca volvulus antigen Ral-1.";
Nucleic Acids Res. 18:4933-4933(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Robinson D.G., Mieskes G.; Retention and retrieval: both mechanisms cooperate to maintain calreticulin in the endoplasmic reticulum."; J. Cell Sci. 107:2705-2717(1994).
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                                                                                                                                                                                                                                                                                Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-90370496; PubMed-2395661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Soennichsen B., Fuellekrug J., van Nguyen P., Diekmann W.,
                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                          ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVBUT SECRETION FROM ER.
MISSING (IN REF. 3).
*, BC37C3C0F1054FB2 CRC64;
                   X APPROXIMATE REPEATS
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100.0%; Pred. No. 4.8e-80;
ive 0; Mismatches 0;
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STRAIN=SPRAGUE-DAWLEY; TISSUE=Liver;
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STRAIN-SPRAGUE-DAWLEY;
MEDLINE-93202172; PubMed-8453984;
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Matches 180; Conservative
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417 AA:
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X APPROXIMATE REPEATS.

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                                                                                                                                                                                                                                                                                                                                    "Identification of protein disulfide isomerase and calreticulin as autoimmune antiques in LEC strain of rats.";
Blochim. Blophys. Acta 1158:339-344(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING STITES.
-!- SUBGRIT: MONOMER (BY SIMILARITY).
-!- SUBGRITARIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-!- GUITON: WAS ORIGINALLY (REF. 2) THOUGHT TO BE D-BETA-
HYDROXYBUTYRATE DEHYDROGENASE.
                                     SEQUENCE OF 18-29.

BEDILNE-91054414.

Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,

Maclennan D.H., Meldolesi J., Pozzan T.;

Galreticulin is a candidate for a calsequestrin-like function in

Ca2(+)-storage compartments (calciosomes) of liver and brain.";
                                                                                                                                                                                                                                                                                            MEDLINE-94072621; Pubmed-8251535;
Yokoi T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
                                                                                                                                                                                MEDLINE-92360010; PubMed-1497655;
Nakamura M., Michikawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001860; Calreticulin,
InterPro; IPR001866; ER_target.
InterPro; IPR00268; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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                                                                                                                                                                                                                                       Biochem. Biophys. Res. Commun. 186:668-673(1992).
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P-DOMAIN.
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                                                                                                                                                                   STRAIN-SPRAGUE-DAWLEY; TISSUE-Testis;
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EMBL; X53363; CAA37446.1; -.
EMBL; X13702; CAA31887.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-LEC; TISSUE-Liver;
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S11205; S11205.
S13045; S13045.
A49176; A49176.
S45036; S45036.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L., Vance J.E., Opas M., Michalak M.;
"Calreticulin, and not calsequestrin, is the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic reticulum.";
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                                                                                                                                                                                                                                                                  18 DPAIYFKEQFLDGDAWTNRWVESKHKSDFGKFVLSSGKFYGDQEKDKGLQTSQDARFYAL 77
                                                                                                                                                                                                                                              1 EPAVÝFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
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MEDLINE=91282795; PubMed=2059224;
Fliegel L., Michalak M.;
Fliegel L., Michalak M.;
Fract-twitch and slow-twitch skeletal muscles express the same isoform of calreticulin.;
Biochem. Biophys. Res. Commun. 177:979-984(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
                                                                                                                                                                            Length 416;
                                                                                                                                                                         Score 933; DB 1; Length 41
Pred. No. 1.2e-76;
5; Mismatches 5; Indels
                                                                 ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
2E6713CED31A2970 CRC64;
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MEDLINE-91201375; PubMed-2016321;
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                                                                                                                                                                       vuery match 96.1%;
Best Local Similarity 94.4%;
Matches 170; Conservative 5
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or send un email to license@isb-sib.ch).
                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration
                                       Calcium-binding; Repeat; Signal.
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PREVENT SECRETION FROM ER
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B6082B689DC763A6 CRC64;
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4 X APPROXIMATE
                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN
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PRODOM; PD001866; CALRETICULIN; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
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P-DOMAIN.
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InterPro; IPR000886; ER_target.
                   TISSUE-Lung;
MEDLINE-92002038; PubMed-1911780;
                                                                                                                                                                                                                                                                                                                                     calreticulin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                             Endoplasmic reticulum;
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PIR; C33208; C33208.
PIR; B33208; B33208.
PIR; B33208; E33208.
PIR; F33208; F33208.
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Best Local Similarity
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                                                                                                                                            18 EPVVYFKEQFLDGDGWTERWIESKHKSDFGKFVLSSGKFYGDQEKDKGLQTSQDARFYAL 77
                   Length 418;
               95.9%; Score 931; DB 1; Length 41
95.6%; Pred. No. 1.9e-76;
iive 1; Mismatches 7; Indels
             Query Match 95.9
Bost Local Similarity 95.6
Matches 172; Conservative
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61 SARFEPPSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPAGLDQTDMHGDSEYNIMFGPDIC 120
121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                138 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 197
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                                                                                                                                                                                                                                                                                                                        Matsuoka K., Seta K., Yamakawa Y., Okuyama T., Shinoda T., Isobe T.;
"Covalent structure of bovine brain calreticulin.";
Blochem. J. 298.435-442(1994).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLUAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUBCELLUAR LOCATION: ENDOPLASMIC RETICULUM FAMILY.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
--- InterPro; IPR001580; Calreticulin.
--- InterPro; IPR001686; ER_target.
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PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEF1 CRC64;
                                                                                                                                                                                      Bos taurus (Bovine).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Endoplasmic reticulum; Calcium-binding; Repeat; Glycoprotein.
                                                                                                                                              01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRAIN ISOFORM I (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95.8%; Score 930; DB 1; Length 4vv
95.0%; Pred. No. 2.2e-76;
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4 X APPROXIMATE REPEATS.
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ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 3.
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                                                                                                                                                                                                                        Mammaīla; Eutheria; Ce
Bovidae; Bovinae; Bos.
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256
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162
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400 AA;
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P52193;
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DISULFID
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Smith M.J
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SEQUENCE FROM N.A.
MEDLINE-93013037; PubMed-1398135;
Mazzarella R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding ERP60/cairegulin by the use of a novel nested set method.";
Gene 120:217-225(1992).
                                                                                                                                                                                                                    "Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein."; EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBL_TaxID=10090;
                                                                           01-JAN-1990 (Rel. 13, Created)
1-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PROD626; CALRETTCULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TRRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                            SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; Pubmed-2583110;
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EMBL, M92988; AAA37569.1; --
PIR, S06763, S06763.
PIR, JC1444; JC1444,
SWISS-2DPAGE; P14211; MOUSE.
MCD; MGT:88252; Calr.
InterPro; IPR001580; Calreticulin.
InterPro; IPR001886; ER_target.
Pfam; PF00262; Calreticulin; 1.
                                                          PRT;
                                                                                                                                                                                                           Smith M.J., Koch G.L.E.;
                                                         STANDARD;
                                                                                                                             musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                        TISSUE-Fibroblast;
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                                                        CRTC_MOUSE
P14211;
                                                                                                                                                                                                                                                                                                                                 SEQUENCE
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                                      KESULT 5
CRTC_MOUSE
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Adams M.D., Celliker S.E., Holf R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
A sutton G.G., Wortman J.K., Yandall M.D., Zhang Q., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
Wan K.H., Doyle C., Baxter E.G., Hell G., Nelson C.R., Miklos G.L.G.,
Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
Besson K.I., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
Borkova D., Botchan M.K., Bouck J., Brokstein P., Brottler P.,
Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davis S.M.,
A de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
A bodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pteryyota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Nucleotide sequence of a Drosophila melanogaster gene encoding calreticulin homologue.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                     ER.
                                                                                                                                                                                                                                                                                    BY SIMILARITY.
PREVENT SECRETION FROM ER
24C03B00913408D8 CRC64;
                                              X APPROXIMATE REPEATS
                                                                                                                                                                3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRTC_DROME STANDARD; PRT; 406 AA. P29411; 09VHA3; 01-APR-1993 (Rel. 25, Created) 01-OCT-1993 (Rel. 27, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                             Score 930; DB 1; I
Pred. No. 2.3e-76;
; Mismatches 5;
                                                                                                                                                                                                                                                                    ASP/GLU/LYS-RICH.
                       C-DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [1]
SEQUENCE FROM N.A.
MEDLINE-93208374; PubMed-1296819;
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2
                                                                                                                                                                                                                                                                                                                                          MW.
                                                                                                                                                                                                                                                                                                                                                                                                             95.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     calreticulin homologue.";
DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
308
416
225
202
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223
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269
                                                                                                                                                                                                                                                                                                                                       416 AA;
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Matches 170; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [2]
SEQUENCE FROM N.A.
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> 9 9

123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180

9

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Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W., Rosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., and Glodek A., Gong F., Gornell J.H., G. E., Galon P., Harris M., Harris M., Harris M., Harris M., Harris M., Harris M., Harris N.L., Harvey D., Helman T.J., Wein M. H., Ibeqwam C., Jaali M., Kalush F., Karpen G. H., Kraytz S., Kulp D., Lai Z., Lang Y., Lin X., Katchum K.A., Kimmel B.E., Kodira C.D., Kraytz C., Kraytz S., Kulp D., Lai Z., Lang Y., Lin X., Martiel B., McIntosh T.C., McLeod W.P., McDhreson D., Morkulov G., Milshina N.V., McDarry C., Morris J., Moshefi D., Nourt S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L., Nour S.M., Nalson K.A., Nixon K., Nusskern D.R., Paclas D.B., Nour S.M., Nixon K., Nusskern D.R., Paclas D.B., Nulson R.A., Stunger S., Pollard J., Puri V., Reese M.G., Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H., Spier E., Spradling A.C., Stapleton M., Strong R., Sun E., Syrski M.Y., Wassenbach J., Nand R., Wallsams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., Wallsams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., Wallsams S.M., Woodage T., Worley M., Zhang G., Zhan M., Zhang G., Zhan K., Zhang S., Yao Q.A., The genome sequence of Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-90307981; PubMed-2365822;
McCaullffe D.P., Zappl E., Lieu T.S., Michalak M., Sontheimer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    highly homologous with onchocercal RAL-1 antigen and an aplysia "memory molecule" ";
J. Clin. Invost. 86.032.335(1990)
I.OW AFFINITY CALCIUM-BINDING SITES.
-: SUBCELLOLAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-: SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "A human Ro/SS-A autoantigen is the homologue of calreticulin and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R InterPro; 19700585; Crc.
R InterPro; IPR001580; Calreticulin.
R InterPro; IPR001580; Calreticulin.
R InterPro; IPR001686; ER_target.
Pfem; PF00262; Calreticulin; 1.
R ProDom; P0001866; Calreticulin; 1.
R PROSITE; PS00014; ER_TARGET; 1.
R PROSITE; PS00804; CALRETICULIN.
R PROSITE; PS00804; CALRETICULIN.
R PROSITE; PS00805; CALRETICULIN.
R Eddoplusmic reticulum; Calcium-binding; Repeat; Signal.
SIGNAL.
1 17 POTENTAL.
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V -> L (IN REF. 3).
; 65D72C69D0BEC427 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 91-124 AND 182-220
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46808 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AE003683; AAF54416.1;
PIR; A37158; A37158.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X64461; CAA45791.1;
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406 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Capra J.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
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Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioldea; Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rokeach L.A., Zimmerman P.A., Unnasch T.R.; "Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the calreticulin family of proteins, recognized by sera from patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY.
9537F298A2D31CD6 CRC64;
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4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X APPROXIMATE REPEATS
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                                                                                                                                                                                                                      01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                    388 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PRO0626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Repeat; Antigen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rik; A3230/; A3230/.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=94341871; PubMed=7520419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 53-388 FROM N.A. MEDLINE~88273584; PubMed~2455736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45298 MW;
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                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                      Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               257
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=6282;
                                                                                                                                                                    RAL1_ONCVO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
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                                                                                                                                          RAL1_ONCVO
                                                                                                                                                                                                                                                                                                                                            RAL1.
                                                                                                         RESULT
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;; 7

Gaps

5

30; Indels

14; Mismatches

Matches 132; Conservative

Query Match Best Local Similarity

72.0%; Score 699; DB 1; Length 406; 74.2%; Pred. No. 1.3e-55;

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STRAIN-AX3;
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Q23858;
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         REPEAT
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REPEAT
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REPEAT
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CRTC_DICDI
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                                                                                                      FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                 Gaps
                                                                       4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                               123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                          DNA Seq. 2:235-240(1992).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                         2,
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
MEDLINE-92329978; PubMed-1627827;
Smith M.J.;
"A C. elegans gene encodes a protein homologous to mammalian calreticulin.";
                     Length 388;
                                         30; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PSO0803; CALRETICULIN 1; 1.
PROSITE; PSO0804; CALRETICULIN 2; 1.
PROSITE; PSO0805; CALRETICULIN REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
1-2.
                  68.4%; Score 664; DB 1; 67.4%; Pred. No. 1.7e-52; iive 26; Mismatches 30
                                                                                                                                                                                                                                           01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01.FEB-1994 (Rel. 28, Last annotation update)
CALFEBTICULIN PRECURSOR.
                                                                                                                                                                                                                        395 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CALRETICULIN.
N-DOMAIN.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER, target.
Pfam; PF00262; Calreticulin; I.
PRINTS; PR00626; CALRETCULIN.
ProDom; PD001866; Calreticulin; I.
PROSITE; PS0014; ER_TAKGET: I.
                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; X59589; CAA42159.1; -.
                                         Matches 120; Conservative
                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=6239;
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302
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P27798:
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                    64 FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                             3; Gaps
                                                                                                                                                                                                                                                                                                                  4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                      123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HIGH AND
                                                                                                                                                                                                                                      Length 395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
1-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                 ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
35CA7D2ECID56B03 CRC64;
1-3.
1-4.
2-1.
2-2.
2-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
15-DEC-1998 (Rel. 37, Last annotation update)
DICTORINI PRECURSOR.
DICTOSTELIUM discoideum (Slime mold).
Eukaryota, Mycetozoa, Dictyostellida; Dictyostellum.
                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                    Ouery Match 63.8%; Score 619.5; DB 1;
Best Local Similarity 63.5%; Pred. No. 1.7e-48;
Matches 113; Conservative 26; Mismatches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001580; Calreticulin. InterPro; IPR000886; ER_target. Pfam; PF000262; Calreticulin; I. PRINTS; PR00626; CALRETICULIN. ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                              MM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U36937; AAB87719.1; -.
                                                                                                                                                                              45616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
424
257
202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Endoplasmic reticulum;
222
239
254
268
282
332
133
392
AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DictyDb; DD00042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
191
191
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1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
NAVAZZIO L., Baldan B., Martin W., Mariani P.;
"Evidence for conservation of a calcium homeostat component:
purification characterization and cloning of calreticulin from Euglena
                                                                                                                                                                                                                                                                          61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                       GPGTKKVHVIFNYKGKNVLINKDI-RCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                            8; Gaps
                                                                                                                                                                                                                    4 VYFKEQFLDGDGWTSRWIESK-HKSD--FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                    FROM ER (POTENTIAL).
 1-2.
1-3.
1-4.
3 X 11 AA APPROXIMATE REPEATS.
2-1.
                                                                                                                                                                55.3%; Score 537; DB 1; Length 424; 57.2%; Pred. No. 4.7e-41; tive 36; Mismatches 33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Calcium-binding; Repeat; Signal.
                                                                                                            PREVENT SECRETION FROM ER BAF273694FB6FC37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euglena gracilis.
Eukaryota; Euglenozoa; Euglenida; Euglenales; Euglena.
NCBI_TaxID-3039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Probom; P0001866, Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00003; CALRETICULIN_1; 1.
PROSITE; PS000804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40, Last sequence update)
40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                           401 AA
                                                                                             SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    40, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN.
                                                                                                                          48350 MW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; Y09816; CAA70945.1; -.
                                                                                                                                                                              Best Local Similarity 57.29
Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Endoplasmic reticulum;
                                                                                                                          424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-AUG-2001 (Rel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                          CRTC EUGGR
                                                                                                           SITE
SEQUENCE
                                                                                               DISULFID
                                                                                                                                                                  Query Match
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REPEAT
REPEAT
DOMAIN
REPEAT
REPEAT
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                                                                                 REPEAT
                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
CRTC_EUGGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
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                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam: PF00262; calreticulin; 1.
PRINTS; PR00656; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
SIGNAL
                                                                                                                                                                              64 F-EPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGF 122
                                                                                         Gaps
                                                                                                                   4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                    123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
565FEG3489F77CA7 CRC64;
 PREVENT SECRETION FROM ER (POTENTIAL). 056B074C16292674 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Beta vulgaris (Sugar beet).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Magnoliophyta; eudicotyledons; core eudicots;
Caryophyllidae; Caryophyllales; Chenopodiaceae; Beta.

NCBI_TaxID-3555;
                                                            DB 1; Length 401;
                                                                                        42; Indels
                                                         55.1%; Score 535.5; DB 56.7%; Pred. No. 6e-41; tive 30; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                      20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wendel, 32549; Betvu;1166;32549.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
398 401 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48136 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AJ002057; CAA05161.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. STRAIN-VV-D/ZR5; TISSUE-Leaf;
                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              413
416 AA;
                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                          CRTC_BETVU
081919;
                                                                          Best Local Sim
Matches 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viereck R.;
               SEQUENCE
                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
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                                                                                                                                                                                                                                                                                                             RESULT 11
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Conservative
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Q9XF98;
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                                                                                                                                                                                                                                                                                                                                                 CRTC_PRUAR
                                               4
                                                                                                                                61
      Matches
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                                                                                                                                                                        SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                 Eukaryota; Viridiplantae; Stréptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Malpighiales; Euphorbiaceae; Ricinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                              27 VFFEERF--EDGWEKRWVKSEWKKDESMAGEWNYTSGKWNGD-ANDKGIQTSEDYRFYAI 83
                                                                                   4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                           121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-97435975; PubMed-9290642; Coughlan S.J., Hastings C., Winfrey R. Jr.; "Cloning and characterization of the calreticulin gene from Ricinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
DD57452E76CC7FBC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plant Mol. Biol. 34:897-911(1997).
-!- FUNCTION: THES PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING STIES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                               .
9
      Length 416;
                                               45; Indels
  54.7%; Score 531; DB 1; 55.9%; Pred. No. 1.6e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                415 AA
                                          28; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mendel; 10452; Ricco;1166;10452.
InterPro; IPR001580; Calreticulin.
InterPro; IPR001886; Extraget.
Pfam; PF00262; calreticulin; I.
PRIMTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Castor bean).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47522 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U74631; AAB71420.1; -. EMBL; U74630; AAB71419.1; -.
                                            Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ricinus communis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=3988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        communis L.
                                                                                                                                                                                                                                                                                                                                                                                                                CRTC_RICCO
P93508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                              RESULT 12
CRTC_RICCO
CRTC_RICCO
DD CRTC_RICCO
DT 20-AUG
DE 20-AUG
DE CALRETI
OS RICINUS
OC EUKATYV
OC CLTO III
RT COUDLIN
RA MEDLIN
CC -1 - SI
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Length 415;

Score 527; DB 1; Pred. No. 3.6e-40;

54.3%;

Query Match Best Local Similarity

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reliculum; Calcium-binding; Repeat; Signal; Glycoprotein.
SIGNAL
                                                                                                                                                                                  SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                               22 VFFEERF--EDGWENRWVKSDWKKDENTAGEWNYTSGKWNGD-PNDKGIQTSEDYRFYAI 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                    VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                         121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
+ 4FSF94CBAAGG6690 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. STRAIN-CV. BERGERON; TISSUE-Mesocarp, and Endocarp;
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43;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
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31; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eurosids I; Rosales; Rosaceae; Prunus
NCBI_TaxID=36596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AF134733, AAD32207.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000866; ER_target.
Pfam: PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-AUG-2001 (Rel. 40, Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prunus armeniaca (Apricot).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
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Best Local Similarity
Matches 99; Conserv
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121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                            calreticulin.
                                                                     CRT2_BOVIN
P42918;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
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                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
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                                                                                                                                                                                                                                                          SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                               PROSITE; PS00803; CALRETICULIN 1; 1.
PROSITE; PS00804; CALRETICULIN 2; 1.
PROSITE; PS00805; CALRETICULIN REPEAT; 1.
Endoplasmic reticulum; Calcium binding; Repeat; Signal; Glycoprotein.
VPFEERF--EDGWDKRWVTSEWKKDENLAGEWNYTSGKWNGD-PNDKGIQTSEDYRFYAI 82
                                                           GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                     6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza sativa (Rice).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoldeae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN.
N-LINRED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL)
3172634F1580FC14 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54.3%; Score 527; DB 1; Length 424; 55.9%; Pred. No. 3.7e-40; 1.4e 31; Mismatches 42; Indels
                                                                                                                                                          20-AUG-2001 (Rel. 40, Last Sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                               424 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AB021259; BAA88900.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProDom; PD001866; Calreticulin; 1. PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00262; calreticulin; 1.
                                                                                                                                                 20-AUG-2001 (Rel. 40, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47925 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 55.9%
Matches 100; Conservative
                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424 AA;
                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                               NCBI_TuxID-4530;
                                                                                                                            CRTC_ORYSA
Q9SLY8;
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                    63
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                                                                                                                                                                                                                                                 01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001880; Calreticulin.
InterPro; IPR001880; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium_Pinding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 X APPROXIMATE REPEATS. 2-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-93385184; PubMed-8373827;
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                                                                                                                                                                                        STANDARD;
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421 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9913;
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53.8%; Score 522.5; DB 1; Length 421;

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                        Gaps
                        45;
Best Local Similarity 55.6%; Pred. No. 9.4e-40;
Matches 109; Conservative 12; Mismatches 30; Indels
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January 9, 2002, 14:58:58; Search time 78.15 Seconds (without alignments) 336.904 Million cell updates/sec
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1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180
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Maximum Match 100%
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Gapop 10.0 , Gapext 0.5
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Q91710 xenopus lae	Q26268 aplysia cal	091711 xenopus lae	Q98984 rana rugosa	Oppucl brachydanio	Q16893 amblyomma a	Q9u6s0 strongyloce	Q9u916 drosophila	076961 necator ame	097372 dirofilaria	018478 litomosoide	Q9d9q6 mus musculu	Q40040 hordeum vul	Q40041 hordeum vul	Q43712 zea mays (m	040567 nicotiana t		045034 schistosoma	026514 schistosoma
SUMMARIES	QI	091710	Q26268	091711	098984	Q9PUC1	Q16893	089060	090916	076961	097372	018478	_				040567	Q9FYV2	045034	026514
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ф	Query Match	86.0	82.8	82.1	82.0	80.8	78.2	75.3	72.0	70.2	70.0	69.3	99	55.5	55.5	55.2	53.2	53.0	52.3	49.2
	Score	835	804	797	196	785	759	731	669	681.5	089	673	641	539	539	536	517	514.5	507.5	477.5
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Oper29 solanum mel Opprx7 lampetra re Ogudga homo sapien Osxyf8 trypanosoma Ogudga trypanosoma Ogugga trypanosoma Ogu591 leishmania Ogu592 leishmania Ogu592 leishmania Ogu592 leishmania Ogu592 eptatretus Ozu502 brassiga na O40751 parthenium Ogu665 yarrowia li Ogu28 mus musculu Ogu28 tritrichomo Ogbln3 halocynthia Ogu398 rama rugosa Oguswa lithospermu Ou4702 schistosoma Ogu404 doceonia ogu404 doceonia la Ogu40	Q97784 GLOSOPHILA Q91789 GLOSOPHILA Q02393 GLOSOPHILA Q9val7 Grosophila
Q9ST29 Q9PTX7 Q9UDG2 Q9UDN9 Q9USN9 Q9USN10 Q94592 Q94592 Q94502 Q94502 Q99FC6 Q99FC6 Q99FC6 Q9BFC6 Q9BFC6 Q9BFC6 Q9BFC6 Q9BFC6 Q9BFC6 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC8 Q9BC	09VIP4 09I7S9 002393 09VAL7
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ALIGNMENTS

RESULT 1 091710	Q91710 PRELIMINARY; PRT; 411 AA.	01-JAN-1998 (TrEMBLrel. 05,	01-JAN-1998 (TrEMBLrel. 05,	OL-CON-ZOOI (TIEMBLIEL.			_		_	[1]		TISSUE=BRAIN;	MEDLINE=93074997; PubMed=1445218;	Treves S., Zorzato F., Pozzan T.;	"Identification of calreticulin isoforms in the central nervous	-	_						ProDom; PD001866;	PROSITE; PS00803;	PROSITE; PS00804;	PROSITE; PS00805;	PROSITE; PS00014; ER_TARGET; UNKNOWN_1.		NON_TER 1 1	SIGNAL <1	CHAIN 13 411 CA	SEQUENCE 411 AA; 48344 MW; 891DA66E00EBBEFA CRC64;	
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Query Match 86.0%; Score 835; DB 13; Length 411; Best Local Similarity 83.9%; Pred. No. 2.7e-71; Matches 151; Conservative 15; Mismatches 14; Indels 0; Gaps

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Q26268 Q26268;

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EMBL, X67598; CAA47867.1;
EMBL, X67598; CAA47867.1;
InterPro; IPR001580; Calreticulin.
Pfan; PF000262; Calreticulin; I.
PROSITE; PS000803; CALRETICULIN; I.
PROSITE; PS00804; CALRETICULIN.1; I.
PROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00804; ALRETICULIN.2; I.
NOM_TER 343 343
SEQUENCE 343 AA; 40105 MW; 3E7DDAFA33B911
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PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN.1; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
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Bull, D78589; Barl1429.1; -.
Interpro; IPR000886; ER_target.
Interpro; IPR001580; Calreticulin.
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                                                                                                                                                                                              MEDLINE=93074997; PubMed=1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 144; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                        NCBI_TaxID=8355;
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                                                                                                                                                                  TISSUE-BRAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamamoto S.;
                                                                                                                                                                                                                                                                                                                        system.";
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Q98984;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-93098937; Pubmed-1463604;
MEDLINE-93098937; Pubmed-1463604;
Mennedy T.E., Kuhl D., Barzilal A., Sweatt J.D., Kandel E.R.;
Kannedy T.E., Kuhl D., Barzilal A., Sweatt J.D., Kandel E.R.;
Kannedy T.E., Kuhl D., Barzilal A., Sweatt J.D., Kandel E.R.;
T.Long term sensitization trialing in Aplysia leads to an increase in the calreticulin, a major presynaptic calcium-binding protein.";
Rull S1239; ABABA569.1;
Rull S1239; PR001866; Calreticulin,
Remins; PR00562; calreticulin,
Remins; PR00562; calreticulin,
Remins; PR00563; Calreticulin,
Remins; PR00803; Calreticulin,
Remins; PR008064; Calreticulin, 1,
RNOSTTE; PS008064; Calreticulin, 1,
RNOSTTE; PS008065; Calreticulin, 1,
RNOSTTE; PS008065; Calreticulin, 1,
RNOSTTE; PS008065; Calreticulin, 1,
RNOSTTE; PS008064; Calreticulin, 1,
RNOSTTE; PS008065; Calreticulin, 1
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                                                                                                                                                          61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                  121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                 74 SAKFDKFSNEGKTLVIQFTVKHEQNIDCGGCYVKVFSSDLDQSDMHGESPYNIMFGPDIC 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
                                            16 DPTVYFKEEF--GDDWAERWVESKHKSDLGKFVLTAGKFYGDAEKDKGIQTSQDARFYGL 73
EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    091711;
01-JAN-1998 (TERMELrel. 05, Created)
01-JAN-1998 (TERMELrel. 05, Last sequence update)
01-JUN-2001 (TERMELrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
Emopus laevis (African clawed frog).
Ewkaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostoml;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 82.8%; Score 804; DB 5; Similarity 79.4%; Pred. No. 2.3e-68; 43; Conservative 18; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               343 AA
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Best Local Similarity 79.4<sup>1</sup>
Matches 143; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
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NCBI_TaxID-6500;
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991711

ð 8 ð g ò ద RESULT 091711 1D 099 AC 099 DT 011 DT 010 DE CA OS XA OC EU

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61 QTLVIQESVKHEQNIDCGGGGYVKLFPADLEQTEMHGESEYNIMFGFDICGPPTKKVHVIF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              72 QTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 DGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASFEPFSNKG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yamamoto S., Nakamura M.; "Calnexin: its molecular cloning and expression in the liver of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rana rugosa (Frog).
Skaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana
NCBI_TaxID=8410;
Ireves S., Zorzato F., Pozzan T.;
"Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82.1%; Score 797; DB 13; Length 343;
85.2%; Pred. No. 8.7e-68;
tive 12; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Strong expression of the calreticulin gene in the liver of rugosa Tadpoles.";
J. Exp. 2001. 0:0-0(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                343 343
343 AA; 40105 MW; 3E7DDAFA33B91DE1 CRC64;
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01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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secreted calreticulin protein in Ixodid tick (Amblyomma americanum)
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Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Buechinoidea; Echinacea; Echinoida; Strongylocentrotus.
Strongylocentrotus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jaworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                          Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78.2%; Score 759; DB 5; Length 410; 76.7%; Pred. No. 4.4e-64; Live 15; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUB-SALIVARY GLANDS;
Fain-Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32CCB8750A17DC54 CRC64;
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Last annotation update)
                                                             Last sequence update)
Last annotation update)
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    410 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN. 1; 1.
PROSITE; PS00805; CALRETICULIN. REPEAT; 3.
PROSITE; PS00014; ER. TARGET; UNKNOWN 1.
                                            Created)
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                                                                                                                                                                                                                                                                                                                                                                   J. Insect Physiol. 41:369-375(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL, U07708; AAC79094.1; -.
InterPro, IPR000886; ER_target.
InterPro, IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47485 MW;
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09,
17,
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                                                                                                                                                                                                                                            SEQUENCE OF 49-410 FROM N.A.
    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 76.78
Matches 138; Conservative
                                        01-NOV-1996 (TrEMBLrel.
01-JAN-1999 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
TISSUE-SALIVARY GLANDS;
Jaworski D.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CALRETICULIN PRECURSOR
                                                                                                                                                                                                                                                                  TISSUE-SALIVARY GLANDS
                                                                                                                                           Amblyomma americanum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                        NCBI_TaxID=6943;
                                                                                                                                                                                                                                                                                                        Needham G.R.;
                                                                                                     CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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Q9U6S0
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                                                                                                                                                                                                                                                                                  121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                 139 GPPTKKVHVIENYKGKNLQINKDIRSKADVYSHLYTLIVRPDNTYEVKIDNSKVESGNLE 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
                                                                                                                                                                                                                                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                           Gaps
                                                                                                                                                                                 1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                      19 KPAVYFQEEFGDGDAWKERWIQSKHKSDYGQFKLSAGKFYGDEEKDKGLQTSQDAKFYAH 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 VYFKEQFLDGDGWKSRWVESKHKSDYGQWKLTSGKFYGDPELDKGLQTSQDARFYALSSR 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brachydanio rerio (Zebrafish) (Zebra danio).

Brakryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.; "Genes Dependent on Zebrafish cyclops Function Identified by AFLP Differential Gene Expression Screen."; Genesis 0:0-0(1999).
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                                                                                                   Length 419;
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InterPro: IPR00086; ER.target.
InterPro: IPR00186; Calreticulin.
Pfam; PR00262; Calreticulin.
PRINTS; PR00626; Calreticulin. 1.
PRODOM; PD001866; Calreticulin. 1.
PROSITE: PS00803; CALRETICULIN. 1; 1.
PROSITE: PS00804; CALRETICULIN. 2; 1.
PROSITE: PS00804; CALRETICULIN. 2; 1.
PROSITE: PS00804; CALRETICULIN. 2; 1.
PROSITE: PS00805; CALRETICULIN. 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80.8%; Score 785; DB 13; Length 4 79.7%; Pred. No. 1.5e-66; ive 19; Mismatches 17; Indels
                                                                                                                                         16; Indels
PS00805; CALRETICULIN REPEAT; 3.
PS00014; ER_TARGET; UNKNOWN_1.
419 AA; 48658 MW; 2C857036769673BF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNU-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN.
                                                                                               82.0%; Score 796; DB 13;
80.6%; Pred. No. 1.4e-67;
iive 19; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 79.7%
Matches 141; Conservative
                                                                                                                    Best_Local Similarity 80.6
Matches 145; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
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PROSITE; 1
PROSITE; 1
SEQUENCE
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Q9PUC1;
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RESULT 10 999 WG1 909 WG1 909 WG1 901 WG1 800 WG2 900 WG2 900 WG1 9

RESULT Q16893

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SEQUENCE FROM N.A.

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Query Match Best Local

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63 SFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
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                                                                                                    21 VYLKENF-DNENWEDTWIYSKHPGKEFGKFVLTPGTFYNDAEADKGIQTSQDARFYAASR 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18 VYFKEEFLD-DSWKERWVQSKHKSDYGEFVLSAGKYFGDATRDQGMKTSQDAKFYSRAAK 76
                                                               4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
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                                                                                                                                                                                                                                                                                                                       123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strongylida;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Necator americanus.
Sukaryota: Metazoa; Nematoda; Chromadorea; Rhabditida; Str
Anoylostomatodea; Anoylostomatidae; Bunostominae; Necator
NCBI_raxID=51031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood Berry C., Fullkrug R., Beck E.;
"Calreticulin is a hookworm allergen.";
Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
BEBL; AJOG6790; CAAA7254.1;
InterPro; IPRO01580; Calreticulin.
   30; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
21F38B0515487B6F CRC64;
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01-NoV-1998 (TrEMBLrel. 08, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel. 10, Created)
(TrEMBLrel. 10, Last sequence update)
(TrEMBLrel. 17, Last annotation update)
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68.5%; Pred. No. 9.8e-57;
tive 30; Mismatches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403 AA
   14; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.; 1.
PROSITE; PS00804; CALRETICULIN.; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
PROSITE; PS00014; ER_TARGET; UNKNOMN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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46833 MW;
Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best_Local Similarity 68.5
Matches 122; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                097372;
01-MAY-1999 (
01-MAY-1999 (
01-JUN-2001 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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076961;
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097372
ID 097372
AC 097372;
DT 01-MAY-
DT 01-JUN-
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CRC OR CG4249.
Drosophila melanogaster (Fruit fly).
Eukaryota, Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pteryota, Meoptera; Endopterygota, Diptera; Brachycera; Muscomorpha;
Ephydroidaa; Drosophilidae; Drosophila.
                    Susan J.M., Just M.L., Lennarz W.J.;
"Cloning and Characterization of AlphaP Integrin and Calreticulin in Embryos of the Sea Urchin.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF177915; AAD55725.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001886; ER_target.
InterPro; IPR001866; Calreticulin.
Prim; PR00462; Calreticulin, 1.
PRINTS; PR00466; Calreticulin, 1.
PROSTIE; PS00804; CALRETICULIN.
PROSTIE; PS00804; CALRETICULIN. 2; 1.
PROSTIE; PS00804; CALRETICULIN. REPEAP.; 3.
PROSTIE; PS00804; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 SPEPFSHKGOTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
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L Submitted (JAN-1997) to the EMBL/GenBank/DDBU databases.

EMBL; AB000718; BaA86379.1; -.

R FlyBuse; FBG00005585; Crc.

InterPro; IPR001580; Calrettculin.

R InterPro; IPR000886; Extraget.

R Pfam; PF00262; Calrettculin.

R PROSTIE; PS00806; CalretTculin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 19 POTENTIAL.
20 421 CALRETICULIN.
421 AA; 48822 MW; 172C664F59F41F93 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-WAY-2000 (TrEMBLrel. 13, Created)
01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 75.3%; Score 731; DB 5; Best Local Similarity 74.7%; Pred. No. 2.1e-61; Matches 133; Conservative 19; Mismatches 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 699; DB 5;
Pred. No. 2.2e-58;
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74.2%;
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3

Gaps

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SEQUENCE FROM N.A.

Q90916 Q90916;

STRAIN-OREGON-R;

Query Match Best Local Similarity

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2; Gaps

Indels

28;

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RA Arakwa T., Hara A., Shibata K., Yoshino M., Itoh M., Ishil Y.,
RA Arakwa T., Hara A., Shibata K., Konno H., Adachi J., Fukuda S.,
RA Arakwa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Salto R.,
RA Gadota K., Matsuda H.A., Ashburner M., Batalov S., Casvant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Fleischmann W., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonado M.F.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F,
RA Winshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
B., Hasebila R., Kawaji H., Kohtsuki S.,
B., Raseli R., Rawashi R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
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B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
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B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Kawaji H., Kawashi S.,
B., Raseli R., Raseli R., Kawaji H., Kawashi S.,
B., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., Raseli R., Raseli R., Kawaji H., Kohtsuki S.,
B., Raseli R., R
                                                                                                                                                     64 FEP-FSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                19 VYFKEEFLD-DEWENRWIKSKHKDDFGKWEISHGKFYGDAVKDKGLKTTQDAKFYSIGAK 77
                                                      4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                       123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
26; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                           380 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-C57BL/6J; TISSUE-TESTIS;
MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD001866; Calreticulin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:1920566; 1700031L01Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00262; calreticulin; 2. PRINTS; PR00626: CALDEMITATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 17,00031L01RIK PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 409:685-690(2001).
EMBL; AK006582; BAB24660.1;
  Matches 122; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1700031L01RIK.
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09D906;
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09D906
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metažoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Litomosoides.
                                                      Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE-99094497; PubMed-9879888;
Tsuji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.
"Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 680; DB 5; Length 387;
Pred. No. 1.3e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MacLennan K., Hoffman W.H., Taylor D.W.;
MacLennan K., Hoffman W.H., Taylor D.W.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ001621; CAA004877.1; -
InterPro; IRF001580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CALRETICULIN.
E7741BF6AAFA5885 CRC64;
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Last annotation update)
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Pred. No. 5.8e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70.0%; Score ucv,
68.5%; Pred. No. 1.3e<sup>.</sup>
+ive 27; Mismatches
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PRODOM; PRO101866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
NON. 15.
375 A3, 43842 WW; 03F7642FBF; SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                          ProDom; PD001866; Calreticulin; 1.
PROSITE: PS00804; CALRETICULIN 2; 1.
PROSITE: PS00804; CALRETICULIN 2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                       filarial parasite Dirofilaria immitis.";
                                                                                                                                                                                                                                                                             Mol. Blochem. Parasitol. 97:69-79(1998).
EMBL; AF052978; AAD03405.1; -.
Interpro. PR001580; Calreticulin.
Pfam; PF00262; calreticulin.
PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44941 MW;
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68.5%;
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                                              Eukaryota, Metazoa, Nemato
Onchocercidae, Dirofilaria
NCBI_TaxID=6287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 68.5%
Matches 122; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Litomosoides sigmodontis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RAL-1 PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
387
  CALRETICULIN PRECURSOR
                             Dirofilaria immitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 387 AA;
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Best Local Similarity
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Signal. SIGNAL

DOR READ DR RE

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64 FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
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                                                                                                                                                           Gaps
                                                                                                                                                                                                             4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS
                                                                                                                                                                                                                                        1 VYFQEEFLDGERWRNRWVQSTNDSQFGHFRVSSGKFYGHKEKDKGLQTTQNSRFYAISAS
                                                                                                                                                           ö
                                                                                                        Length 380;
                                                                                                                                                           Indels
PROSITE; PS00803; CALRETICULIN_1; 1.
SEQUENCE 380 AA; 44198 MW; B13BC4ADB11B0442 CRC64;
                                                                                                  Query Match
66.0%; Score 641; DB 11;
Best Local Similarity 65.0%; Pred. No. 6.4e-53;
Matches 115; Conservative 30; Mismatches 32;
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
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NON_TER
SEQUENCE
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Q43712
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hordoum vulgure (Barley).
Rukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
Tritticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLS$GKFYGDEEKDKGLOTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-WORRX; TISSUE-OVARY;
MEDLINE-94339696; PubMed-7914763;
Chen F., Hayes P.M., Mulroony D., Pan A.;
Chent F., Hayes P.M., Mulroony D., Pan A.;
Chent F., Hayes P.M., Mulroony D., Pan A.;
Chent F., Hayes P.M., Mulroony D., Pan A.;
Calrettculin in barley."
Plant Cell 6:835-844(1994).
FMBL; L27348; AAA32948.1; -.
Mendel, 8546; Horvu;1166;8546.
InterPro; IPR001886; ER_Earget.
InterPro; IPR001880; Calreticulin.
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Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                            124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                         141 IKKVHVILYFKNQYHENKKPIRCKVDGFTHLYTLILRPDLSYEVKVDGQSIESGSIE 197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  412 AA; 47037 MW; 37F6C95D6AA78AB0 CRC64;
                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55.5%; Score 539; DB 10; 56.4%; Pred. No. 3.4e-43; ative 31; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00162; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN, 1.
PROSITE; PS001866; CALRETICULIN, 1.
PROSITE; PS00803; CALRETICULIN, 2; 1.
PROSITE; PS00804; CALRETICULIN, 2; 1.
PROSITE; PS00805; CALRETICULIN, 2; 1.
PROSITE; PS000014; ER_TARGET; UNKNOWN, 1.
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                                                                                                                                                                                                      PRT;
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
CALRETICULIN (FRAGMENT).
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Matches 101; Conservative
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                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                 CALRETICULIN (FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID-4513;
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NON_TER
SEQUENCE
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STRAINMOREX; TISSUE-OVARY;

MEDLINE-9433696; PubMed=7914763;

Chen F., Hayes P.M., Milloony D., Pan A.;

Chen F., Hayes P.M., Milloony D., Pan A.;

Chen fitcation and characterization of cDNA clones encoding plant

calreticulin in barley.";

plant Cell 6:835-843(1994).

EMBL; L27349; AAA2349.1, ...

RM EMBL; L27349; AAA2349.1, ...

RM EMBL; L27349; AAA2349.1, ...

RM EMBL; L27349; Calreticulin.

RM FRONZE; Calreticulin.

R PROMINE; PROMO1866; Calreticulin.

R PROMINE; PROMO1866; Calreticulin.

R PROSTE; PSOMB03; CALRETICULIN. 1:

R PROSTE; PSOMB03; CALRETICULIN. 1:

R PROSTE; PSOMB04; CALRETICULIN. 1:

R PROSTE; PSOMB05; CALRETICULIN. 1:

R PROSTE; PSOMB05; CALRETICULIN. 1:

R PROSTE; PSOMB04; CALRETICULIN. 1:

R PROSTE; PSOMB04; CALRETICULIN. 1:

R PROSTE; PSOMB05; CALRETICULIN. REPERT; 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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SEQUENCE FROM N.A.

Dresselhaus T., Hagel C., Loerz H., Kranz E.;

Dresselhaus T., Hagel C., Loerz H., Kranz E.;

"Isolation of a full-length cDNA encoding calreticulin from a PCR Interary of in vitro zygotes of maize.";

Plant Mol. Biol. 31:23-34 (1996).

EMBL; Z46772; CAA867221.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
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J. Exp. Bot. 46:1603-1613(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 55.5%; Score 539; DB 10; Best Local Similarity 56.4%; Pred. No. 3.4e-43; Matches 101; Conservative 31; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415 415
415 AA; 47359 MW;
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Triticeae; Hordeum.
NCBI_TaxID=4513;
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                                                                       SEQUENCE FROM N.A.
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| Mendel; 11228; Zeama; 1166;1128. | Mendel; 11228; Zeama; 1166;1128. | Mendel; 11228; Zeama; 1166;1128. | MercPro: IPR000866; ER_target. | InterPro: IPR0001560; Calreticulin. | From: Pr00262; Calreticulin; 1. | R. PRINTS; PR00626; Calreticulin; 1. | R. PROSITE; PS000803; CALRETICULIN_1; 1. | RROSITE; PS000804; CALRETICULIN_2; 1. | RROSITE; PS000805; CALRETICULIN_2; 1. | RROSITE; PS000014; ER_TARGET; UNKNOWN_1. | RROSITE; PS000014; ER_TARGET; UNKNOWN_1. | Menorite; PS000014; ER_TARGET; CALRETICULIN. | SIGNAL | Learner | Learner
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3; 61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120 6; Gaps 4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179 Query Match 55.2%; Score 536; DB 10; Length 421; Best Local Similarity 56.4%; Pred. No. 6.7e-43; Matches 101; Conservative 31; Mismatches 41; Indels (q ò g õ

Search completed: January 9, 2002, 15:03:27 Job time: 269 sec

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